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Editorial Notes

EXCAVATION is, of course, the chief means by which the archaeologist performs his task of reconstructing the past, and it is likely to remain such. The different branches of archaeological technique are mostly concerned either with excavation itself and its products, or with chance discoveries made by digging for some other purpose. Let no one think that anything said here is intended to depreciate the value of excavation ; to do so would be unscientific and therefore absurd. But excavation is merely the first step in a long and arduous undertaking. No excavation is complete until it has been followed up by the conservation and exhibition of the discoveries, and by adequate publication of the results.

Conservation may take the form of ' filling in', as on most British prehistoric sites, where the policy of keeping them open is often impracticable on grounds of expense ; or by judicious restoration, such as that of H.M. Office of Works, or, abroad, by Sir Arthur Evans at Knossos. It may also take the form of treatment of objects *in situ* before removal ; the best examples in recent years being the measures adopted by Sir Leonard Woolley at Ur and by the Harvard–Boston Expedition at Giza (see ANTIQUITY, 1927, I, 216–8). Here great progress has been made, not so much in science itself as in its application by archaeologists. Fifty years ago we should have had nothing from these two sites but the imperishable remains, many of which would have been meaningless when thus divorced from their perishable framework.

With the definitive publication of his results, the excavator's task may be said to end, for he is not, as such, concerned with the exhibition of his finds in museums. Publication necessarily involves the collaboration of specialists, and the stratigraphical position and associations of the important finds must be clearly stated. But no one expects the excavator to publish the final and complete account of everything. For instance, it is not his business to publish the transcription of every inscribed tablet or fragment of papyrus found, nor need he even be able to decipher them himself—many of the most distinguished and capable excavators today cannot do so. It is enough that he should supply the expert with certain essential information about their discovery.

The excavator is the front-fighter of archaeology ; he fights in the front-line trenches of the army which is advancing knowledge (not to be confused with that other army which claims to be advancing civilization !). In return he has a right to demand the support of those who can follow up his achievements and utilize them to the best advantage. Does he receive that support ? So far as certain already overworked specialists are concerned, he receives it in full measure ; but the patrons of learning, particularly the Universities, do not support him as they should. Specialism is a whole-time job, and there are not enough specialists. A young student's choice is generally limited by the necessity of earning a living ; if there are no endowments to help him during his ' post graduate ' period and few professorships to look forward to later on, he must perforce abandon the subject of his choice and yet another student is lost, too often to become a square peg in a round hole.

How is it, for instance, that papyrology, the study of ancient papyrus texts, seems to be becoming a lost art in this country ? It is not for lack of material, because there are masses of it buried in store-rooms at a certain University. How many students has that University endowed to transcribe and edit these papyri, recovered by one of its own professors ? (The answer is—ONE !) What proportion of the cuneiform tablets found during the last fifteen years or so has been published in Britain by endowed British students ? Is there any other country which has accumulated such masses of magnificent historical material, only to leave it unused ? What is wrong with the 'home front' that it permits

such a state of affairs, remaining apparently unconscious of any responsibility in the matter? Shortage of funds is no excuse, for money is forthcoming for other things for which no responsibility has been incurred.

For, apart from special cases (such as the papyri) where the responsibility is as clear as the daylight, there exists also a general moral responsibility to support the worker in the field. Unless he is supported in the obvious way, by enabling students to study and edit his specialist material, it would be better not to go on excavating, or to confine excavation to such sites as are endangered by 'the march of progress'. To carry out costly excavations in the East and then leave the important documents unread and unpublished is a futile proceeding; but it has been done, and the guilt remains.

Not only are the documents left undeciphered; there is no room, it seems, even to exhibit them or a mass of other objects found. It is notorious that the British Museum is overcrowded; so too is the Pitt Rivers Museum at Oxford, which one might almost call the original home of Anthropology itself, so closely is it associated with the names of Tylor and Pitt Rivers. So too is the Ashmolean, the oldest museum in England, and one of the finest. There is no University in the world, we venture to say, with such a heritage; there are few that would not have put it to better use.

The proper remedy for this state of affairs is, of course, not to stop accumulating material but rather to subsidize the study and conservation of it. Till then, however, one naturally turns to consider other forms of archaeological work. Foremost among them is archaeological survey—the accurate location, planning, description and illustration of ancient monuments. We in England are justly proud of the pioneer work of our Royal Commission on Ancient Monuments and of the Ordnance Survey; and we think it is time to apply their methods to other countries. The proposed Archaeological Survey of Palestine is a step in the right direction, and deserves every support (including donations); it is to be carried out jointly by the Palestine Exploration Fund and the British School of Archaeology in Jerusalem, and has the promise of Government help. The results will appear in illustrated reports issued at regular intervals.

The idea of such an Archaeological Survey deserves to be widely circulated, because it has a great future and is applicable also to other regions. What would not one give for Reports describing, on Royal Commission lines, the antiquities of Mesopotamia! Something of the kind, good enough in those days but now in some respects out of date, was attempted single-handed by Captain Felix Jones and H. B. Lynch in the middle of the nineteenth century. The mere description, illustrated by plans and air-photographs, of the visible remains of the country would be of the greatest use to intending excavators, and will besides record facts that would otherwise be lost to knowledge. We commend the suggestion to the young and active British School of Archaeology in Iraq (Gertrude Bell Memorial). It is, we feel sure, the sort of undertaking that Gertrude Bell herself would have approved, for much of her own work was of precisely this character.

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If conservation of antiquities is the prime consideration, as of course it must be, the question arises—Where are those antiquities safest, in the ground or in an urban museum that may be bombed? The problem is a terrible one, but it must be faced. The one course which is 100 per cent. safe is complete publication, for this ensures that *some* historical records will survive, even if the originals perish. (But we are *not* publishing!). Thus in the same way, it is sometimes necessary, in the interests of science, to destroy the upper layer of a site in order to explore the lower layers; but before this is done the most complete record is made of the upper layer, which for the future will exist only on paper. Sir Flinders Petrie has stated the case with admirable lucidity (*Methods and Aims in Archaeology*, 1904, 173–4). The Ordnance Survey is attempting to do the same sort of thing for old estate-maps and cadastral plans in private hands. These usually exist only in the form of a single, irreplaceable manuscript, at the mercy of fire, damp and other accidents, including sometimes the negligence of ignorance. The broadcasting of facsimiles is the only reasonably sure safeguard against complete loss. Even a single edition may achieve this, as did Archbishop Parker's edition of Asser's Life of Alfred, published in 1574. (The original manuscript was destroyed by fire in 1731). Unfortunately antiquities are not always safe even when buried in the ground, especially in the East; but at any rate they are not then concentrated in vulnerable spots.

The Story of Uruk

by Walter Andrae

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URUK is the ancient name of the great ruin-field of Warka, which is situated near the station of El Khidr on the Irak railway, about 20 kilometres north of the Euphrates. It is now in the heart of a desert region almost exactly in the middle of the land of Sumer (the Shinar of the Old Testament).

Sumer might well be said to be the hub of the ancient East, for it is almost equidistant from the frontiers of Persia, Anatolia, Syria and Palestine and from the shores of the Black Sea and the Caspian. So far as is at present known, Uruk was the largest of the ancient Sumerian cities—larger than Ur, Lagash or Eridu, Larsa, Nippur, Eshnunna or Kish, larger even than the older city of Babylon. Uruk owed its existence to the proximity of water. The original neolithic settlement lay in or on the lagoon, whose alluvium was met with in our deepest trial-pit. After the retreat of the Persian Gulf, whose shore is now some 300 kilometres to the southeast, the land was watered by the Euphrates or covered by its marshes. When it was a flourishing city Uruk lay on the right or western bank of a branch of the Euphrates. Although now quite dry and filled up with wind-blown deposits, the bed of the river can still be followed for miles, by the string of deserted village mounds on its banks. As time passed the city shrank in size, until at last it came to an end after the destruction of the Parthian kingdom by the Sasanids in the 3rd century A.D. In Greek and Parthian times it was called Orchoë, and in the Old Testament Erech. During the last five hundred years of its existence it still enjoyed periods of prosperity. As late as the 2nd century B.C. two of the greatest temples of Mesopotamia were rebuilt on the sites of the old temples of Bit-resh and Esh-gal.

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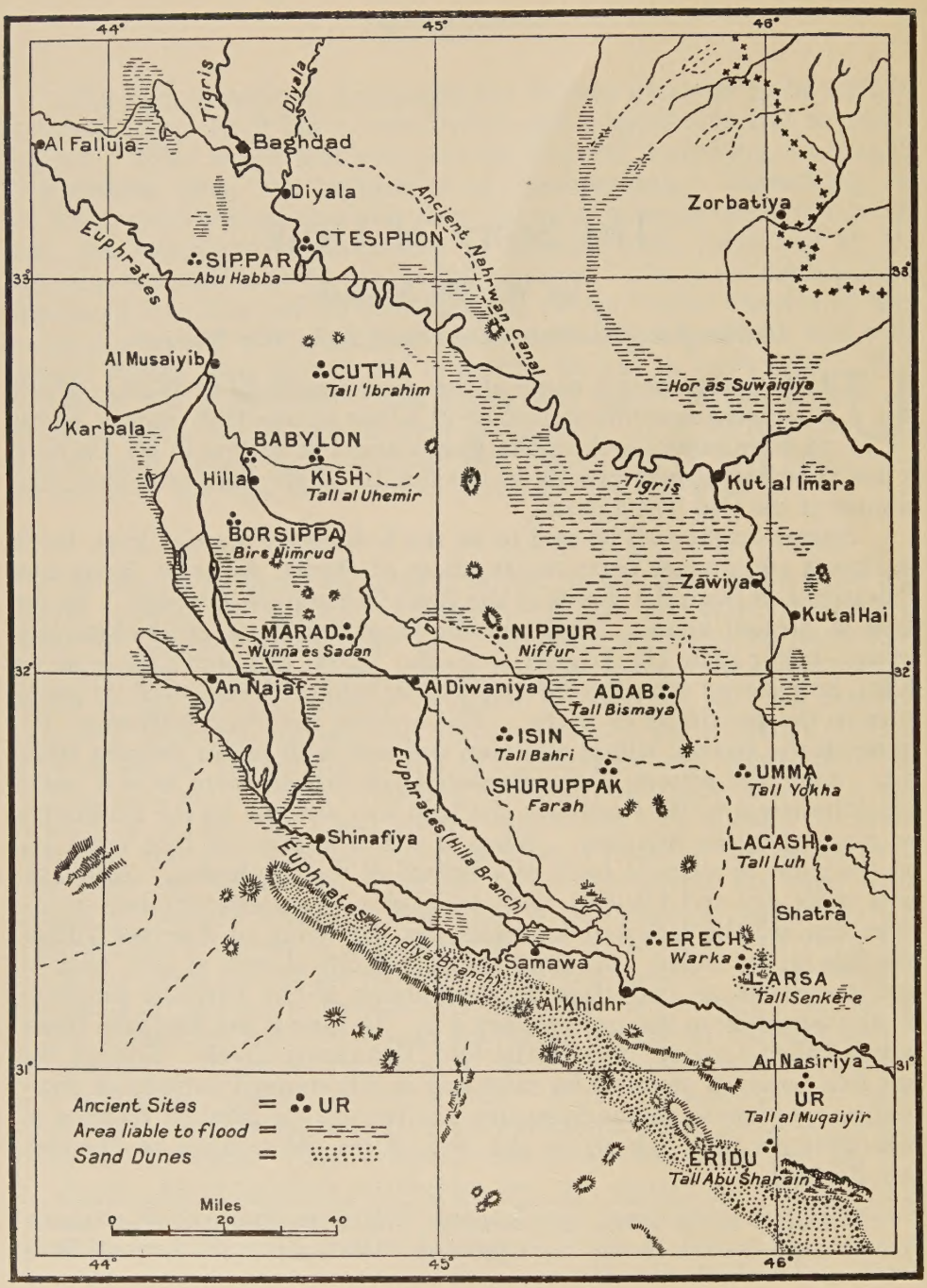
*Translated by the Editor, by permission, from a Handbook of the Deutsche Forschungsgemeinschaft (Berlin, 1935), pp. 9–29, which is sold at the Vorderasiatische Abteilung of the Berlin State Museum.


44°
45°
46°
33°
32°
31°
Tigris
Diyala
Al Falluja
Baghdad
Diyala
Ancient Nahrwan canal
Zorbatiya
Euphrates
CTESIPHON
SIPPAR
Abu Habba
Al Musaiyib
CUTHA
Tall 'Ibrahim
Hor as Suwaiqiya
Karbala
BABYLON
Hilla
KISH
Tall al Uhemir
Tigris
Kut al Imara
BORSIPPA
Birs Nimrud
Zawiya
Kut al Hai
MARAD
Wunna es Sadan
NIPPUR
Niffur
An Najaf
Al Diwaniya
ADAB
Tall Bismaya
ISIN
Tall Bahri
UMMA
Tall Yokha
SHURUPPAK
Farah
Euphrates (Hilla Branch)
Shinafiya
LAGASH
Tall Luh
Euphrates (Hindiya Branch)
Shatra
ERECH
Warka
Samawa
ARSA
Tall Senkere
Al Khidhr
An Nasiriya
UR
Tall al Muqaiyir
ERIDU
Tall Abu Sharain
Ancient Sites = UR
Area liable to flood =
Sand Dunes =
Miles
0
20
40

Numerous literary references had already revealed a good deal about the commercial activities of the Greek Orchoë, its priesthood, schools and astrology, together with something of the Uruk of Sumerian times. In 1854 Loftus made a very useful plan of the city area and also dug in several places, exposing one of the clay nail mosaics. Then in 1912–13 J. Jordan and C. Preusser carried out a joint excavation on behalf of the Deutsche Orient-Gesellschaft, working there under great difficulties. They came from the German excavations at Assur, where they had been trained in the methods elaborated by Robert Koldewey at Sinjirli and (even more) at Babylon. These methods they had to adapt to conditions at Warka. Uruk, like every other ancient site, laid down its own laws and conditions. Mounds and hollows alike were covered in sand ; both temples of the Greek period were buried under a huge pile of bricks. At Koldewey's suggestion Jordan turned his attention first to one of these temples. He obtained a clear picture of the Anu-Antum (Bit-resh) temple, the shrine of Anu, the god of heaven, one of the great triad and of his partner Antum. In the 51st volume of the Reports of the Deutsche Orient-Gesellschaft, Uruk-Warka, are published both photographs of this temple and of its contents and records which later could be checked and completed. This took place after the war, in 1928, when as the result of a memorandum drawn up in 1927 by Jordan and myself, the work was resumed.

The decision to spend so much on German work in the East at a time when general conditions were so bad was justified, not merely by the results of the pre-war excavations and by what we knew from literary sources about the importance of Uruk, one of the cities of the famous Gilgamesh epic ; it was also inspired by the hope of obtaining more results as valuable for the early history of early Sumerian culture, and indeed for the history of civilization itself, as Woolley was then beginning to get at Ur. As each season passed this decision proved more and more correct. Not a winter went by without the discovery of some important new architectural forms, works of art and inscriptions. As the excavations extended both horizontally and vertically, there were revealed in concrete form not only the beginnings and limits of each separate period, but also, what is more, an unbroken sequence ranging from the first neolithic settlement of lake-dwellers right down into historic times.

We discovered not only types but also prototypes. Nowhere else has such a clear and complete picture been obtained. It is one which,

it is hoped, may provide other excavators in Mesopotamia with a useful series of dated standard types.

The system of excavation adopted was, as I have said, that of Koldewey ; it might almost be called the microscopic method, and is one that is now adopted at every scientific dig. In Germany since the war, indeed, the minute and careful study of stratification, and the documentation of prehistoric and early historic finds has led to remarkable achievements. Similar care was needed when the early prehistoric strata were revealed beneath the oldest substantial buildings at Warka. By exact record of position it became possible to date not only the buildings and their contents, but also the earliest human and animal clay figurines and the earliest script—that called ' pictographic ' because it employs pictures of men, animals, plants, houses, implements, etc.[1]

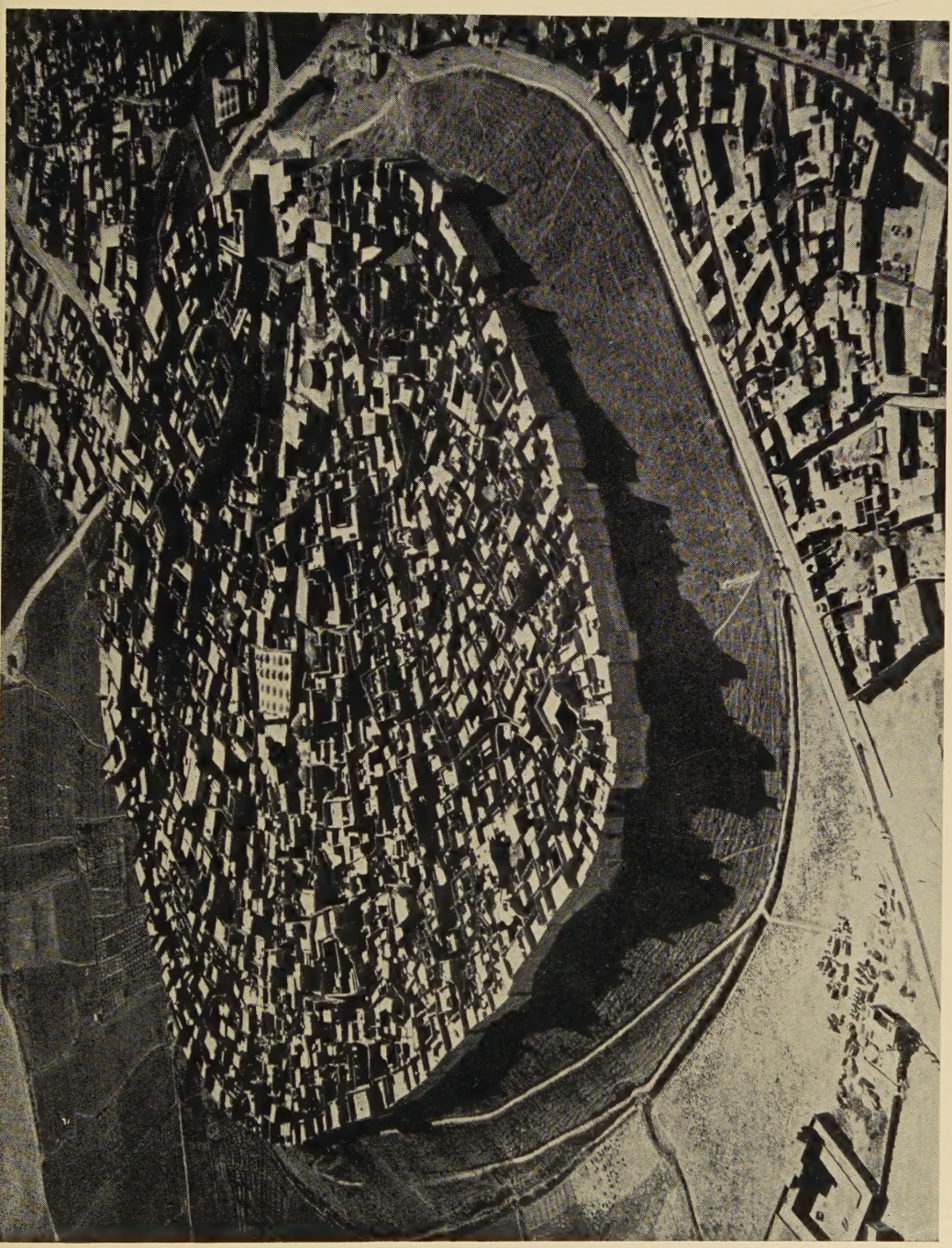
To comprehend the meaning and character of any given stratum one must visualize the way in which it was formed. When a community settles on a given spot, it brings there all kinds of things which never leave the place again. Ash accumulates on the hearths, and so do potsherds, earthen remains of all kinds, bits of walls, kitchen refuse, such as meat and fish-bones, shells, implements, querns and so forth. The more substantial the house, the more extensive will be its remains. A tent, when burnt down, leaves nothing ; a reed hut leaves at most a layer of ash ; but a building of mud or crude brick will yield considerable debris and even remains of its walls. Of houses of stronger materials, such as wood, burnt brick or stone, one may hope to recover quite distinct outlines. But as soon as this more substantial form of architecture is encountered, one has to deal with extensions and reconstructions, a jumble of old and new. Then the architect must begin to survey and classify. It is necessary to relate the smaller finds to all the old occupation-levels and floor-levels, though of course this is done also in the older layers, where no substantial buildings are found.

So the original settlement, through destruction and decay, continues steadily to rise and eventually becomes an inhabited mound, until sometimes the site is abandoned, as occurred at Uruk in the 3rd century A.D. Many such sites, however, are still inhabited to-day, such as Kirkuk, Erbil (see PLATE I), Nebi Yunus (part of Nineveh).

The aim of the excavator, then, is to determine as accurately as

[1] We hope shortly to publish an article on the Origins of Writing, but are awaiting the publication, promised this year, of Dr Falkenstein's work on the pictographs found at Uruk.—Editor.

PLATE I

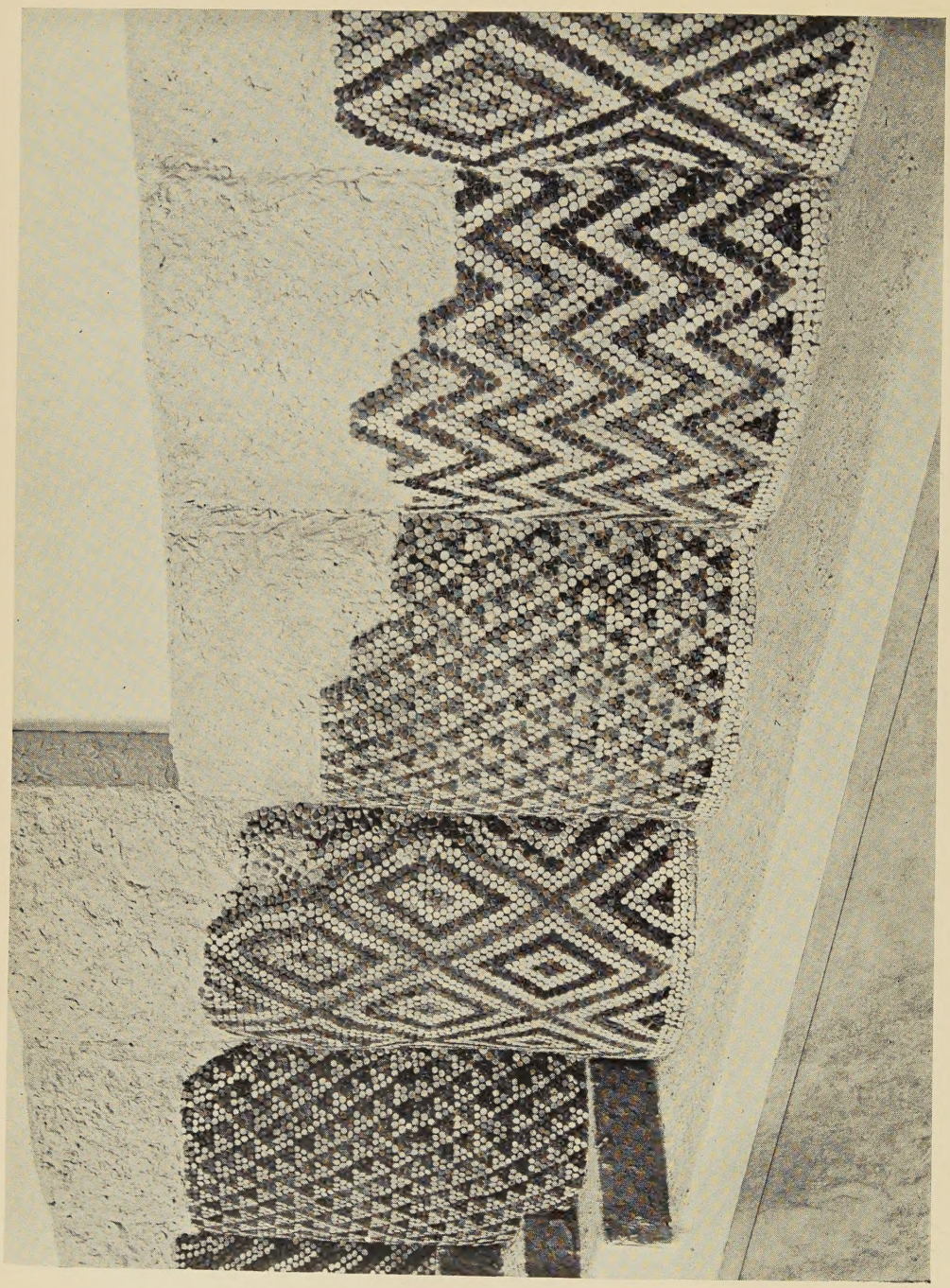


ANCIENT CITY OF ERBIL (ARBELA) ON ITS HUGE, ARTIFICIAL MOUND, DATING BACK TO PREHISTORIC TIMES

Royal Air Force, Crown copyright reserved

facing p. 136

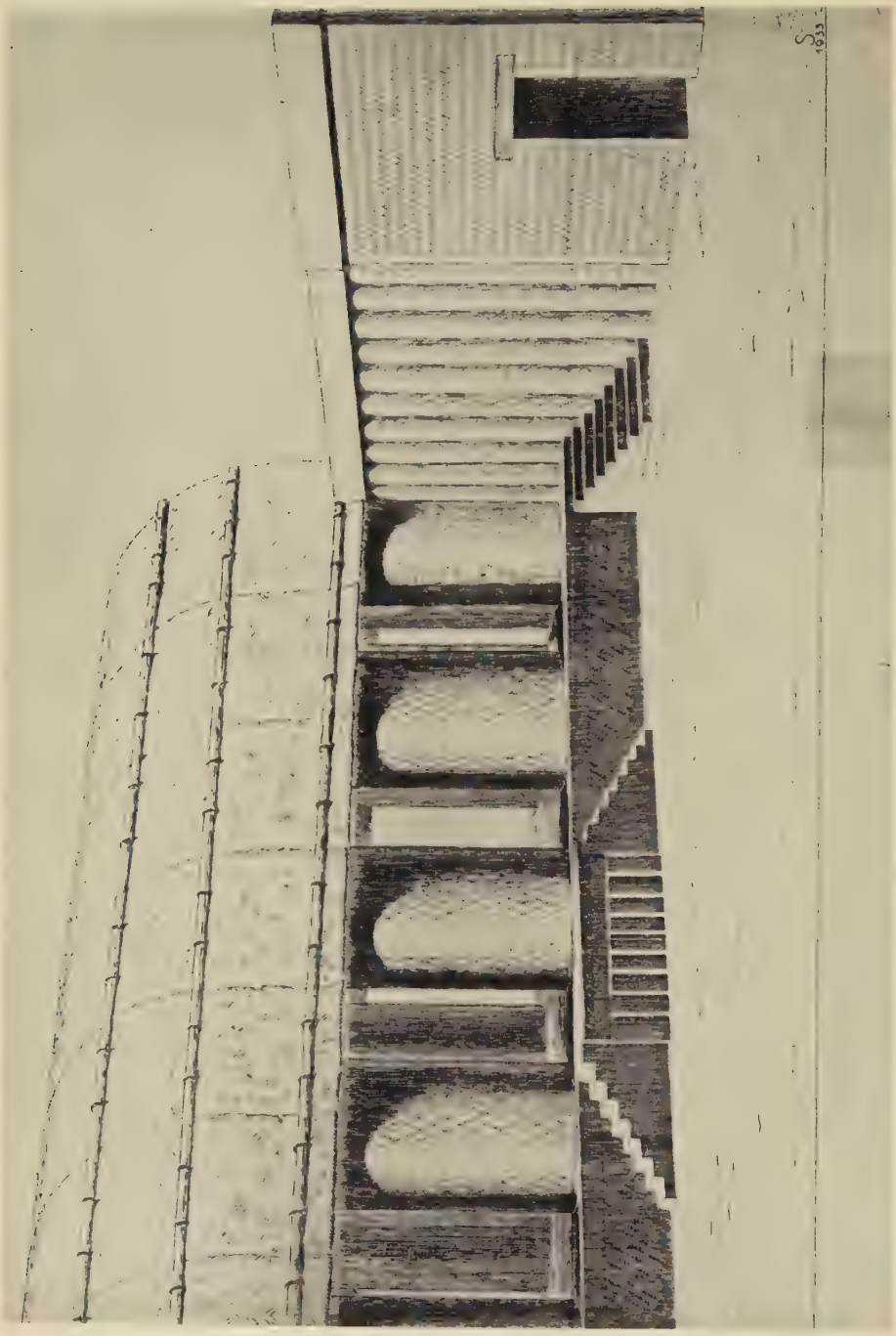
PLATE II



CLAY NAIL-MOSAIC OF THE INNIN TEMPLE, EANNA (4TH MILLENNIUM) AS RECONSTITUTED IN THE BERLIN MUSEUM

MOSAIC WALL OF TEMPLE-PLATFORM IN EANNA, URUK (4TH MILLENNIUM) AFTER A PAINTING BY ELISABETH ANDRAE

PLATE IV



RESTORATION OF THE HALL OF COLUMNS, URUK IVb (MIDDLE OF 4TH MILLENNIUM)
Ph. Berlin Museum

PLATE V

ALABASTER VASE FROM URUK III, SHOWING CULT-SCENES

FAÇADE OF KASSITE TEMPLE FROM URUK (1450 B.C.) RE-ERECTED IN THE BERLIN MUSEUM

possible the dates of all the superimposed strata in the ruin-hill. Mesopotamia in general, and Uruk in particular, is peculiarly favourable for such investigations. With its unbroken sequence of deposits Uruk covers a period of four thousand years. For this there are few parallels in Egypt and none in Greece or Northern Europe. There is always some unfortunate impediment to the establishment of a long historical sequence—either the site starts too late or else it has been deserted too early.

The excavator's hope of achieving a rigid system of absolute chronology is frustrated by the absence of written documents. Back to about 3000 B.C. the study of cuneiform tablets written in the Babylonian-Assyrian language tells us something about Sumerian literature and the traditional chronology. At the beginning of the 3rd millennium the chronology is still the subject of controversy, but afterwards, from about the middle of the millennium, it becomes more securely established.

Back beyond the controversial period into the 4th millennium the character of the script helps us until about 3200 B.C., when we find at Uruk the first, pictographic, script whose 1500 signs consist of pictures of objects which are generally easy to identify. These are scratched on the surface of small clay tablets, whereas the later cuneiform signs derived from them were impressed in the clay with a wedge-shaped stylus (cuneus=a wedge). From developments in the pictographs themselves it is possible to date about 500 years of stratification, namely that from Uruk IVb to Uruk I,[2] the lowest stratum (IVb) containing the first written documents. In still older periods and in deeper strata we are obliged to fall back on comparisons with other sites. Absolute chronology being there unattainable, we have to be content with relative chronology.

After 3000 B.C., however, the absolutely-dated strata yielded a wealth of finds—art-products, implements, graves, ornaments, pots—datable by documents and buildings or, themselves acting as type-fossils, helping to date otherwise undated strata. Thus do the objects found enable us to reconstruct a historical picture of the site. For the earliest periods one has to rely entirely upon the artifacts ; for the subsequent ones the evidence is supplemented by written documents.

One must not expect the classified finds necessarily to enlighten us on the subject of race, to tell us what particular race was domiciled

[2] The numbering of the strata at Uruk begins at the top, numbered 1, and works downwards.—Translator.

here at that time. They do, however, reveal something of far more real value—how these early folk, of no matter what race, gradually acquired a knowledge of themselves, of God and of nature, and how they mastered the art of life. To claim so much for the interpretation of a few pots and painted figurines of men and women, cattle and sheep, may perhaps be thought extravagant. Yet these occasional witnesses take their place in the far richer groups of painted pottery found in the plateau and foot-hills of Iran and Northern Mesopotamia. A comparison between these vessels of the Highland culture and those of the Sumerian plain justifies an ascription to the Highland people of a more vigorous grasp of the trinity of God, man and nature. That this understanding deteriorated almost to the point of extinction amongst the dwellers on the plain is to be inferred both in the far greater simplicity of their ' form-vocabulary ' and also in the falling-off in comprehension and treatment there displayed.

We should know little of the life and habits of the neolithic peoples of the East were it not for the discoveries made by A. Langsdorff in 1932, in the prehistoric mound at Persepolis. For neither at Al 'Ubaid nor at Uruk was the full extent of the neolithic strata exposed. The transverse sections at Uruk revealed thin burnt layers and remains of reeds, making it seem highly probable that the dwellings consisted of reed huts. Gradually at Uruk walls of crude brick begin to appear, starting in stratum XVII.[3] The walls are certainly of a simple character, but then it is an early date to encounter such a form of building at all. Reeds and clay were known as traditional building materials as early as the Gilgamesh Epic, and they are perpetuated in a more substantial form in the brick architecture of Mesopotamia and the stone architecture of Egypt ; and they are still used in the traditional style today in both countries.

Uruk has yielded some early (4th millennium) pictures of this architecture. Seals and other objects represent houses and palaces (see FIGURE opposite), as well as other architectural features of a symbolical religious character.

Symbolical as contrasted with practical domestic architecture begins in Sumer in the middle of the 4th millennium, and at Uruk in stratum VI. So far back has excavation revealed the efforts of the Sumerians to protect their cult-buildings from decay by perpetuating, so to speak, the traditional forms of reed-construction. This they did

[3] The lowest stratum found at Uruk is that numbered XVIII.

by covering the perishable crude brick walls with a thick coating of clay plaster in which they set coloured clay nails, thus producing a durable encrustation of mosaic (PLATES II and III). At this level, too, are found those earth-platforms which were forerunners of the famous temple-towers or zigurrats. The Tower of Babylon was the last and greatest outcome of this line of development. Since 1929–30 it has become evident at Uruk that the early dynastic and predynastic Sumerians—as we can now, though still with certain reservations, call the people of Uruk back to stratum VI—were the originators of substantial building in brick and in clay nail mosaic, and of the ' temple-mountain'.

At Uruk itself the earliest groups of these cult-buildings are beginning to come to light. Their uncovering has advanced furthest in

SEAL-IMPRESSION FROM URUK IV, SHOWING ELEVATION OF A BUILDING

V, IVb, and IVa, and in III a large portion of them has been revealed. We did not succeed, by tunnelling beneath the zigurrat of 2300 B.C., in discovering the zigurrats associated with the ground-level structures of these strata. Little is known of their form. One of the buildings flush with the soil in V—an elongated rectangle over 80 metres (262 feet) long—was to have been erected on carefully laid stone foundations, but it was never built. Yet another cult-building of this period, or perhaps of an even earlier one, was found on the second zigurrat of Uruk, which is situated beside the later Anu-Antum temple and for that reason was called by us the Anu zigurrat. Upon it is the first and only temple on the top of a zigurrat of which we have any knowledge—a modest little structure of crude brick with a ground-plan like that of the building in V. It has a recessed wall, and the walls were white-washed. Both the shorter sides of the court were constructed as entrances, provided with double gates, thus giving the court the appearance of a vestibule

with narrow chambers and steps on each side. This arrangement may perhaps be explained as follows :—The deity might be supposed to enter the building as if it were a guest-house open at the sides, just as are now the reception-huts of tribal chiefs. In order to take up its residence on earth, to ' manifest ' itself, the deity descends into its man-made image and its abode, the earthfast temple. The Anu zigurrat and this white temple were altered on one occasion to raise their height ; but after the end of the 4th millennium they were apparently left untouched and unused, suggesting that they were regarded as sacrosanct. We know what the outer and upper portions of the Anu zigurrat were like ; it consisted of an earthwork levelled at regular intervals to form flat terraces of reeds and asphalt. The outer surface of the walls was set in places with clay vessels, to enable the angle of slope to be left steep. For without such superimposed rows of vases, this early staged zigurrat—more properly to be described as an earth-hill than as a building—must have had a much gentler slope. These vases developed into thick hollow cones, which in turn became thick nails with hollow heads ; from these again evolved clay nails. Artistic designs formed with these nails begin in the very ancient stratum VI, and they are characteristic of the architecture down to the period of stratum III, though even after then they were not entirely given up. It is only at Uruk that we find this art extensively used, and we may therefore assume that it originated and became diffused from there. Since then, excavators have been on the look-out for these clay nails at other ancient sites in Sumer ; but up to the present they have found only occasional examples, or found them divorced from their context, as at Ur. Uruk has yielded substantial walls and columns in stratum IVb (PLATE IV). This is a great discovery ; for it means that we now know something not only about the massive towers and ground-plans of the 4th millennium, but also about the developed arts of wall-building and wall-decoration. The date of Uruk IV cannot be put much later than 3200 B.C.

The technique of the clay nail mosaics consists in closely studding the thick clay plaster of the walls and of the round columns of small sun-dried bricks with baked clay nails of about a finger's length. Any child could roll out a clay cone with its hands, and they could be hardened in any domestic hearth. From such small beginnings originated a brilliant invention which served to protect the perishable clay walls from damage by rain, and, in addition, since the heads of the cones were painted either red, white or black, led to the make of

three-colour patterns. These patterns are obviously derived from textiles and from mat-plaiting in zigzag, lozenge and triangle designs.

The best explanation of the origin of these patterns seems to be that, in a land of reed and clay buildings, the clay walls were lined with plaited mats, as they still are today in Southern Iraq. This custom was perpetuated in the clay nail mosaics, which represent the starting-point of substantial building, as contrasted with buildings of perishable plant-materials.

These splendid buildings surround the 'sacred mountains', and were dedicated in some way to the service of the deity. In size and magnificence they surpass all other buildings of the period. It was, then, the traditional sacred hut, constructed like the others of reeds, that was given this permanent form, so fitting as being the house of the deity. The presence of the deity amongst men was better assured, apparently, if the perishable hut were consolidated in earth, brick and mosaic work. One might perhaps associate this transition to a more permanent kind of building which took place after Uruk VI, with an increase of political power; but we have no independent evidence of such. It is not until Uruk IVb that writing begins, nor can we begin to read it until three centuries later. Political history based upon written documents begins only in the 3rd millennium. The only history extracted from the architecture of Uruk is, at most, the fact of a radical change in building methods as shown by the choice of building-material; this merely permits us to the conjecture that a different people may have acquired control. Thus, quite unexpectedly in V we find foundations of quarried stone, obviously intended for a large building; and in I appears a strange kind of brick, the plano-convex. Of any change of form in the ground-plan we know nothing so far; in fact, in both V and IV we find a type of ground-plan similar to that of the temple on the top of the Anu zigurrat (VI); and the type of wall apparently continued without change. Up to the present, therefore, we are hardly justified in assuming any sweeping political change, but only the possibility of immigration of a foreign element. But in any case the autochthonous element preponderated at all times, even later in the clearer light of history.

The first appearance of writing in IVb, marked also by the first appearance of clay nail walls, and by the great hall of mosaic columns (PLATE IV), must always remain a most outstanding occurrence. There is still no evidence of writing at Uruk before IVb. Then suddenly and without warning there appear fifteen hundred signs and pictographs

scratched on clay. They seem to have been written and used without any signs of hesitancy. In the next strata they are gradually modified and simplified, until at about the date of Uruk I we have a Sumerian script which we can read. But these early records are political documents only as affording an insight into economic life; as yet they permit of no further deductions.

The seal-impressions on clay fastenings are also connected with the economic life of the times. They range from IV down to still older levels. But the decipherable seal-impressions on pot-, bag- and door-fastenings provide much food for reflection. They comprise not only series of animals, many of them executed with masterly skill, but also a remarkable assortment of heterogeneous creatures, and occasional representations of conquering and vanquished heroes and of buildings like those uncovered by excavation. Before the invention of pictography, that is, of writing, these seal-pictures were the only vehicle for the transmission of ideas, at any rate to the extent that a seal-picture represented the owner and manifested his personality and activities.

At Uruk, then, we have found the parent forms of seals, writing and architecture—a rare stroke of luck.

In III the forms evolved further. Pictorial motives—figures of men and animals, of a gateway, of rosettes—were introduced into the wall-mosaics. These were formed by hand out of clay and then baked, so that, like the clay nails, they could be set in the wall-plaster while it was still soft. Pictorial friezes of this type, made of cubes of coloured stone or shell, occur elsewhere, at Al 'Ubaid near Ur and at Jemdet Nasr near Kish, for instance. These mosaic-pictures, like the seals, represent scenes of peace and war. Now war is an outstanding political event; but the word 'war' exhausts the description; the victor, suitably attired, is represented as bigger and more powerful and is the only one to be armed, the vanquished foe is generally naked and in chains. No ethnic difference between conqueror and vanquished has so far been observed, nor do the Uruk seals help us in this respect.

To III belongs a large collection of dedicated stone sculptures—recumbent rams, bulls and lions and ornamented stone vases—removed during the restoration of a temple. Amongst the vases is a large one of alabaster decorated with horizontal zones set in low relief (PLATE V). This is a cult-object and a work of art of the first importance, for it gives us a glimpse of the interior of a temenos. At the entrance the goddess, or rather the high priestess who incarnates the goddess, receives the princes who advance with offerings. This explains a number of

incomplete seal-pictures. The problem of what went on in the temple is here quite simply and clearly answered :—it was the communion of man with God through oblations drawn from the whole realm of nature, and that not by destruction but by dedication.

We have not been fortunate enough to find in II or I any great interdependent architectural remains or important works of art, such as were found in the strata described above. Nevertheless we found in them valuable evidence of both ordinary and religious life. Our story now advances about a thousand years, to the time of Ur-Nammu, ruler of the 3rd Dynasty of Ur, who about 2300 B.C. enlarged and heightened the zigurrat, giving it the shape which the ruin of today still in some measure retains—a rectangular mass with sloping sides and three ramped approaches, just like the zigurrat of Ur which Ur-Nammu also made.

Already then that ground-plan has developed which 1700 years later was still retained by the Tower of Babylon. At Uruk too this venerable form survived into late Assyrian and neo-Babylonian times, and probably influenced the design of the Tower of Babylon. From the period of Ur-Nammu to that of the Assyrians, about 700 B.C., the temple area of Innin-Ishtar was enclosed by a strong wide battlemented wall, within the confines of which we have brought to light three sanctuaries built on the level, and there is still much to be discovered. Two of these are tucked away into a corner by the zigurrat steps, demonstrating quite clearly that the deity comes from the spirit-world to the earth where it makes its visible abode.

The third temple was built about 1450 B.C. by the Kassite King Karaindash. Here we certainly encounter the work of a foreign people, who from 1750 B.C. ruled over Mesopotamia for 500 years. The temple of Karaindash was still dedicated to the goddess Innin-Ishtar. One cannot even now see any great difference in the ground-plan from those of Uruk VI to IV. The traditional plan lived on for two thousand years. In the north of Mesopotamia, north of Nineveh, there has come to light a very ancient precursor of this type dating from the 4th millennium (Tepe Gawra VIII). It forms a mysterious link between Sumer and the north.

Warka has left us, in this little Kassite temple, not only the first independent structure that is in no way connected with the Akkadian Temples, but, more than that, the first monumental Kassite sculpture we have obtained (PLATE VI). The outside walls have niches in which are placed erect columnar figures. These standing statues of deities

are set all round, dispensing the water of life which unites them with each other and with earth and heaven. The idea is not new, but its combination with brick architecture, the technique of the brick relief and the style of the single figures, indicate the individuality of the Kassu people, who evidently did not become entirely submerged in the native Sumerian and Akkadian element. These brick reliefs were in complete ruin. Under Dr Jordan's directions the excavators assembled the fragments. In the Near Eastern Department of the Berlin Museums a portion of the temple front comprising eight figures has now been reconstituted. How different a world is this from that of the old mosaic-walls, exhibited in the same room ! And yet these fourth and second millennia are united by spiritual threads which at an even later date were still woven into the style of architecture, sculpture and literature. There can be no doubt but that the ancestry of the wall-structure of the Babylonian, Assyrian and post-Babylonian temples can be traced back to Kassite and even Sumerian architecture ; and that the artistic achievements of the later periods generally can only be explained in terms of the earlier ones. But motives which, in the increasing decadence of the later periods, became barely intelligible, were full of life and meaning in earlier times. Here we can see the origins of symbolism, or at least symbolism in its early stages, when it is still capable of interpretation ; here too we encounter the basic principles of sculpture, principles which derive from the attempt to materialize an idea.

It is not too much to claim for Uruk that it exhibits a clear sequence of four millennia of culture. Noteworthy monuments bring us down to Hellenistic and Parthian times, that is, into the 3rd century before and the 3rd century after Christ. Two of the greatest of the old Mesopotamian temples—the Anu temple (or Temple of Heaven) of Bit-resh, and the temple of Esh-gal on the southern mound at Uruk were built in the Babylonian style, proportions and design only a hundred years after Alexander the Great, and portions of great Parthian buildings, such as the Gareus temple, date from the 3rd century A.D., according to the Greek dedicatory inscription of a certain Artemidorus, who seems also to have founded a temple at Dura on the Middle Euphrates.

Of course the small sculptures, clay figurines and pots found there bear the mark of western influence ; but they have not wholly parted company with the older forms, which survive and turn up again in Christian and Islamic times.

The political changes and events reflected in the monuments here described may best be summarized as follows :—

After the Kassite supremacy Uruk may be supposed to have passed almost without resistance under the sway of the successive new rulers of the country. These were the Kings of Babylon (about 1000 B.C.), and of Assyria (about 700 B.C.), then the so-called Chaldeans or neo-Babylonians (after 600 B.C.), then the Achaemenid Persian Kings; until, under the Seleucids native rulers were established or tolerated who had finally to give place to the Parthian governors. The city of Uruk, like most Mesopotamian cities, came to an end through the Sasanian incursion in the middle of the 3rd century A.D.—an event which may well be connected with the breakdown of the old system of river-control and canals of the country. The Sasanids built on other sites, as we know from Ctesiphon and Kish. Uruk fell into decay with the drying-up of that branch of the Euphrates which, at the height of the city's prosperity, flowed past it on the east. Ever since then this vast ruin-field, for four thousand years the site of a great city, and inhabited even before that from time immemorial, has lain derelict in the desert. It has its roots in legend. The great Sumerian-Babylonian-Assyrian Epic of Gilgamesh began at Uruk. Here reigned that hero who sought and found his friend, who mocked and spurned Ishtar, braving death and attempting to overcome it, who penetrated to the underworld and then strangely lost the herb of life without solving the problem of death. This epic alone would give Uruk a supreme importance. But there were ruling dynasties who called themselves after Uruk in the 3rd millennium. The traditional cult of the female deity and of the god of heaven must have spread the fame of the city far beyond its walls and boundaries amongst all the peoples of Mesopotamia. Furthermore, in its latest days, under the Greeks and Parthians, it was to Uruk that there resorted all who went out in search of the wisdom of the Chaldeans, of their astronomy, and of a decadent astrology.

But the imperishable elements are those pure springs of knowledge, hidden beneath the great deposits of the 4th millennium, which the excavations of German scientists have caused to flow again.

Art History as a Key to Racial Migration

A New Field for Research

by D. Talbot Rice

'Les formes ornementales et le système décoratif employé par un peuple ont plus d'importance que des faits ethnographiques ou des particularités d'architecture pour déterminer les relations et les migrations des races'.

THIS statement, made by Curajod some years ago during the introduction to a course of lectures at the Louvre, is definitely provocative, for, however true it may be and however much we can learn from a study of ornamental forms and systems of decoration with regard to trade and intercourse, it has in general proved extremely difficult to correlate the movements of designs with those of definite groups of people, still more with those of definite races. We can, for instance, assert quite definitely that the neolithic pottery of China is closely related to that of the black-earth region of south Russia, but we find it by no means easy to associate the invention or transportation of this pottery with any particular group of peoples, and we cannot even say for certain that the fact that we find it in two so far separated regions can be regarded as proof of any very considerable racial migration. Such a migration does, indeed, seem the most satisfactory way in which to explain the relationship, but it can also quite satisfactorily be accounted for by the conquest of one region by a small minority from the other, or of both by a small minority from some common centre, who imposed the imported style on the new possession.

An examination of the aesthetics of this pottery does, however, suggest that a further conclusion is possible. The style of this early pottery is extraordinarily distinct,[1] and it would seem that it must not only have been designed and developed by a people with an equally distinctive turn of mind, but also have been acceptable only to those

[1] For a brief study of it see Bachofer, *Burlington Magazine*, Dec. 1935.

peoples who thought and reacted in a similar manner. The study of racial aesthetics is as yet in its infancy, but we are already coming to realize that certain types of art are not only characteristic of certain regions, their nature being determined by climatic and other geographical factors, but also that certain types of art are definitely to be associated with certain groups of peoples. Worringer, in his book *Form in Gothic*, has convincingly suggested that the twirling, searching linear feeling and ornament which we can trace on Gothic sculptures of the 12th century, and which we see more clearly in the early Christian carvings of this country and of Scandinavia, or in the pagan bronzes of north Germany, is to be attributed to the tall, fair, long-headed inhabitants of northern Europe. Not only are the people to be regarded as the carriers, and probably also as the inventors of the art ; further, it may be said with a considerable degree of confidence that the art is essentially a part of the make-up of these peoples, and that it only found favour where their blood had penetrated to a marked degree.

We can suggest that the neolithic pottery of China and the black-earth regions is to be associated in a similar manner with a group of peoples who are not only distinguished by a particular art, and hence a particular method of thought, but also by a particular racial type. In the present state of our knowledge it is, however, more difficult to make a suggestion as to what that type actually was ; it may be said with practical certainty that it was not a branch of the Indo-European group, for members of that race have always favoured an art of a very different character, where naturalism and the use of the human body as the principal model are outstanding characteristics. That the similarity is not to be accounted for by trade alone we feel convinced, for it is of far too intimate a nature to have been conveyed in so superficial a manner.

It would seem, in fact, that three explanations of similarity in art are to be distinguished and that three methods of contact are to be regarded as responsible for them. In the first, motives of decoration or even actual objects characteristic of a particular art are copied in another region, to which that art may well be completely foreign in content and outlook. The copying is thus direct and superficial, and is usually done with little understanding. The motives may be conveyed by trade, or the copying may be due to the insistence of a patron, perhaps a member of a conquering aristocracy ; but no considerable migration takes place, and the peoples of the two areas concerned are almost certain to be of completely different racial stocks. The imitation

of oriental textiles or ceramics in the Italy of the early Renaissance or the later Middle Ages may be cited as an example.

In the second type motives are copied and the style and feeling of the art is in addition fully assimilated, the peoples of the area where it is intrusive not only finding in it something which is an attractive design or shape which they wish to make use of, but also sensing in it something which is in close accord with their own particular aesthetic understanding. In this case trade, conquest or migration may account for the similarities, but the essential factor is that the peoples of the two regions concerned must have the same mental outlook. When research has been carried further we shall doubtless come to realize that they must also be of the same physical stock. The taking over of non-representational art by the majority of the Islamic world from the Semites of northern Arabia may be cited as an example.

In our third group the essentials of the art—motives, style, content, approach and aesthetic understanding—all are common to the two areas, though in each of them there are probably certain superficial differences. In this case the similarities are almost certainly to be accounted for by migration, either from one area to the other or from a common centre to both, while the dissimilarities are due either to locality, to the influence of an older culture which is different in the two regions, or to the influence of different waves of culture which are superimposed from outside, and which exercise an influence either in the first or the second manner that we have distinguished above.

As far as the correlation of art and racial migration is concerned, this is the only one of the three groups that is important, and it is here that a wide field for research opens itself before us, both with regard to establishing the exact nature of the similarities which are to be classed under this head, and with regard to the association of particular cultures and art systems and with particular racial groups. In this latter respect a vast amount of investigation, which takes into account at the same time archaeology, ethnology and the study of art history and aesthetics, will have to be undertaken before much can even be suggested, let alone affirmed. But with regard to the former, the field is already ripe for the suggestion of certain conclusions, if archaeologists are wise enough not to scorn the art-historians and if the art-historians are prepared to equip themselves as archaeologists. This paper may hence be excused as an essay in a new field of archaeological aesthetics. It may, further, be justified by the fact that it includes some notes on the find made recently at Pasirik in the Altai, which has so

far only been noticed but briefly in the periodical published by the organisation G.A.I.M.K. in the U.S.S.R.[2]

Scythian art[3] is not only one of the most distinctive art-forms that the prehistoric world has given us, but it is also one of the most significant. It is in a sense a primitive art, but it is at the same time extremely elaborated. It offers us, in fact, an amazingly successful combination of non-naturalism and vital energy, of rigorous stylization and the highest verisimilitude, and it would no doubt seem to us equally successful even if the majority of the objects by which we know it were not made of gold. The material does, perhaps, make the art more surprising, as those who have visited the vaults of the Hermitage fully realize, but its richness of material can hardly have affected the judgments of most of us in the west, who only know the art through photographs. A stag from Kostromskaya Stanitsa, in the Kuban, of the VIIth or VIth century B.C. may be cited as a typically and wholly admirable example (FIG. 1). We see in it most of the characteristic features of Scythian art, the doubling of the legs under the body, in what has been called the flying gallop, the stretched-out neck, the conventionalized antlers, which give a superb effect of speed as they lie along the back, and the curious use of part of some bird or animal, in stylized form, to decorate the whole. This use of the part is a fundamental feature of the art, and is, when well done, successful and pleasing. When Scythian art comes under Greek influence, however, as it often did in south Russia after the VIth century B.C., the results of this practice are not always so happy, as is proved by a stag from the Crimea of the early fifth century (FIG. 2). Here the naturalistic, non-stylized approach of the Greek has become confused with the stylized aesthetic understanding of the Scythian, and the stag is covered with fairly exactly rendered animals and birds, which seem singularly out of place, and suggest that the artist had wished to show the main animal dressed in some stuff which bore a naturalistic ornament—and this he very definitely did not set out to do.

In his numerous writings on the subject Rostovtzev has suggested that Scythian art is to be regarded as the result of the penetration of

[2] See no. 2, February, 1931.

[3] We here use the word broadly to describe the whole group, from Hungary on the one side to China on the other. It should in actual fact be limited to describe a branch of the art in south Russia, which flourished between the VIIth and IVth centuries B.C.

what he calls the animal style into south Russia and Siberia from outside, and he suggests that the style was first conceived in Mesopotamia and that it travelled northwards from there by way of Iran, where it was much developed and altered, so that only after its passage through Iran did it take on its characteristic form.[4] It was, after this, further developed in the Scythian-Altai region, but the influence of this region was not fundamental ; it was exercised from above, on an art already three parts formed. If this explanation be true, it is the motives and systems that belong to Iran and Mesopotamia, the animal combat (FIG. 3), the stylized bird-beast, the polychrome treatment, or the pierced work (FIG. 4) that are the essentials of the art, while the elements that are proper to the region to the north, the stag, the reindeer (FIG. 1), the stylized birds, the closely confined composition, or the use of portions of birds and animals to decorate the whole ones, that are to be regarded as intrusive.

Borovka, on the other hand, regards the style as in the main a derivative of the old stone age arts of Russia, Scandinavia and Siberia.[5] For him it is the essentially northern elements that are fundamental, while the Iranian or Mesopotamian ones are to be regarded as later additions. There can be no doubt but that Borovka is correct, and this for various reasons, both practical and theoretical.

In the first place an examination of the nature of the art shows quite clearly that it is one that is proper to certain materials, such as bone, hard leather or wood of limited size, which permit of sculpture on a small scale and in low relief or of a very thin three-dimensional rendering, but not of large scale work, high relief or full modelling. The elimination of any projections, the use of the flying gallop with legs parallel to the animal, and the laying of the antlers along the back; all prove that the initial material was both limited in size, and, unlike the gold, was so fragile that projections would easily be damaged, and hence had to be avoided. Though in the gold the presence of projecting horns or of legs in the standing position would have presented fewer difficulties and complications, the old rigorously bounded design was retained through conservatism, and only in a few late examples was the neatly bounded contour departed from.

There can be no doubt as to the nature of the prototypes of the art ; they must have been akin to the small objects in non-precious materials

[4] See especially *Iranians and Greeks in South Russia*, Oxford University Press, 1922, *passim*.

[5] *Scythian Art*, trans. by V. Gordon Childe, Benn, 1928, *passim*.

of which Borovka has already published examples.[6] Such objects were executed in wood, leather and bone, and their manufacture in these materials continued long after the use of gold had been gradually adopted. The rich man and the chieftain might have his gold, but the poor man continued to use less precious materials, and the trappings of his horses, his saddles, his bridles, in fact, all the objects that he used, were profusely ornamented. Many of the trappings of the wealthier man's horses, too, were undoubtedly also of cheaper materials, and the Pasirik find has acquainted us with a considerable number of them, which were preserved beneath the ice level as if in cold storage. These objects not only serve as additional proof of the simple inspiration behind the gold work, but they also show that the stags and the features of the art that are essentially northern belong to the fundamental, not to the superficial strain.

These conclusions are further borne out by the content and understanding of the art. It has something distant, something almost ascetic about it, in its strange blending of convention and verisimilitude, which seems to be an essential of the region to which it belongs, the steppe and tundra of central and northern Eurasia. Its whole spirit is quite foreign to a mountain area or to a hot, sunny region. In Iran, on the other hand, we find a conception which is certainly akin, but the art is much more mystic, yet at the same time more material. The lion and bull combat, which is undoubtedly Iranian, is typical of this. It is conceived as a mystic symbol of the struggle between the powers of light and darkness, yet it was no doubt originally portrayed with the practical purpose of assisting the eternal struggle along its inevitable course.

If further proof of the northern character of Scythian art be needed, it is furnished by another feature of the Pasirik find. In this burial, which is dated by Russian archaeologists to between the fifth and fourth centuries B.C., a number of horses were interred in the manner usual among primitive nomads around the principal coffin. These horses were, however, dressed up as reindeer, large head-dresses of leather fashioned in the form of antlers being attached to their heads. There can be no doubt as to the purpose of these ; the reindeer was originally the beast on which the culture of the people depended ; it was their beast of burden, their source of food, their very source of life ; so important was it that it may well have assumed a

[6] *Op. cit.*, pls. 59, 61, 62 and 63.

semi-religious character. At a later date, when the reindeer first became rare and then extinct, its role in the everyday life of the society with which we associate Scythian art, was supplanted by the horse, but its memory lingered. It remained a necessary accessory of the future life, even if it could be supplanted in the life of this world, and so the horse substituted for it had to be disguised as a reindeer in order to accompany a chieftain on his journey into the world of the future.[7]

In view of this it seems impossible to doubt the indigenous character of Scythian art. The Iranian elements must be intrusive. They penetrated, however, at an early date, and soon became so intermingled with the original features that it is often hard to distinguish them. On one of the textiles from the Pasirik grave, for instance, there appears a rendering of that creature with bird's head and wings which at a later date became something approaching the emblem of the Sasanian dynasty. It is one of the fantastic monsters of the Mesopotamian-Iranian world, and though it was a motive foreign to the north, it was easily understood and soon found a ready home there.

With these facts as to the nature of the Scythian art established, it is not difficult to see that wherever we find it, it is the Scythian element that is fundamental. In the Kozlov materials in the one direction there is little that is Chinese (FIG. 5). The stuffs might well have come from the central portion of the Scythian sphere, though they are in actual fact paralleled in their own locality by numerous other objects of the same character. In the Zoldhalompuszta stag from Hungary, in the other direction, the Scythian character is equally basic (FIG. 6). The stag differs from its more easterly relations in that the extremities are more prominent and in that it is treated less as a whole—the departure from the primitive bone technique is, in fact, more complete—yet it is entirely Scythian in essence.

In both these instances it is the fundamentals of the art that are constant and the superficial features that vary. Both examples are essentially Scythian and they show us, geographically speaking, the opposite extremes of a family of art which was at one time characteristic of practically the whole of the region in between. There is no possibility that the similarities are to be accounted for by trade or similar spasmodic intercourse between the distant regions ; an object can be copied, but a whole art cannot be assumed in this way. Nor is the

[7] See Soobshtchenic, G.A.I.M.K., February 1931, nos. 1 and 2, more especially p. 10.

PLATE I

FIG 1. SCYTHIAN ART: GOLD STAG FROM KOSTROMSKAYA STANITSA, KUBAN, 7TH–6TH CENT. B.C.
(*Hermitage, Leningrad*)

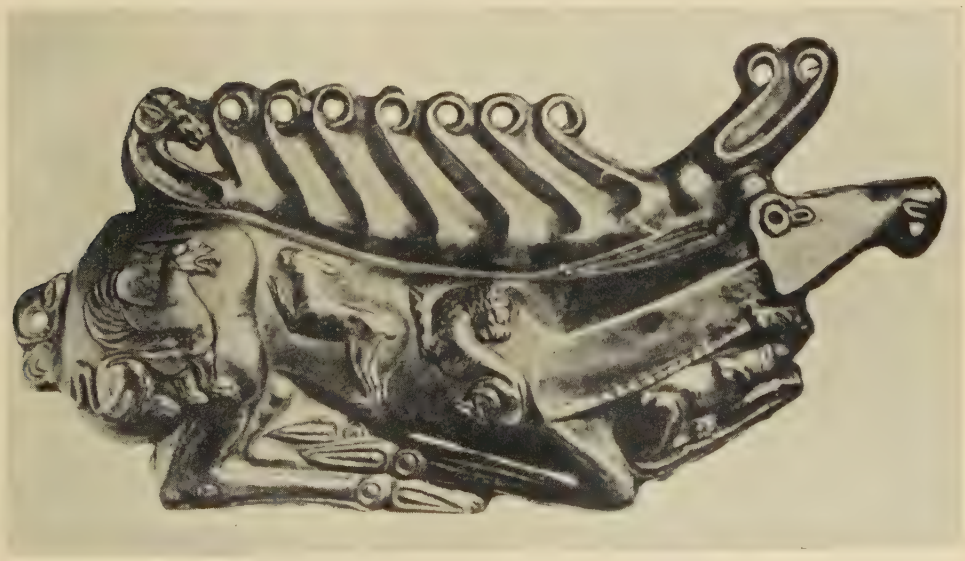


FIG. 2. SCYTHIAN ART UNDER GREEK INFLUENCE: GOLD STAG FROM THE CRIMEA, 5TH CENT. B.C.
(*Hermitage, Leningrad*)

facing p. 152

FIG. 3. SCYTHIAN ART UNDER IRANIAN INFLUENCE: ANIMAL COMBAT (IN GOLD) FROM LIBERIA, 3RD OR 2ND CENT. B.C.
(*Hermitage, Leningrad*)

FIG. 4. SCYTHIAN ART UNDER IRANIAN INFLUENCE: GOLD-PIERCED WORK 3RD OR 2ND CENT. B.C.
(*Hermitage, Leningrad*)

FIG. 5. QUILTED CARPET FROM NOIN-ULA, MONGOLIA, 1ST CENT. A.D.
(Hermitage, Leningrad)

FIG. 6. STAG 'SCYTHIAN' STYLE, FROM ZOLDHALOMPUSZTA, HUNGARY
(National Museum, Budapest)

identical character of the art over this vast area to be accounted for by the second type of connexion that we distinguished, that of conquest. The essentials of the art are far too deep-seated, both in the chieftain's gold and in the poor man's horse trappings, for that to be possible. The third type of connexion that we suggested, that of a considerable cultural migration, is the only explanation that will fit the case.

So far the study of the nature of an art can guide us. It shows us, even further, that cultural migration is probably to be associated with a racial one, and that the migration which carried it in the first instance is definitely not to be associated with any of those movements of peoples of Indo-European type which were taking place between about 1500 and 600 B.C., since the initial character of the art is quite foreign to that which we can associate with this race. Later, when Iranian forms had become superimposed, Iranian peoples may well have carried the mixed art, but they did not originate it or carry it in the first instance.

To hazard a suggestion as to the nature of these first carriers is to tread on very dangerous ground, but one hint as to the solution is available, namely the close relationship which the proto-Scythian bears to the proto-Scandinavian, and which it bears in fact to the primitive art of all northern Europe. Here again the art would seem to be indigenous, and if this be the case, the peoples who practised it must have been closely akin to the Scythians and proto-Scythians. To affirm that they were Nordics would certainly be stretching the point too far ; but to suggest that they were of Nordic stock, akin to the modern Slavs, with a slight Mongol intermixture, does not seem an unreasonable conclusion.

Law and Archaeology

by H. J. Randall

1. Civilisation and the Growth of Law. By William A. Robson, Ph.D., etc. London: Macmillan & Co., 1935. pp. xv, 354. 12*s* 6*d*.

2. Primitive Law. By A. S. Diamond. London: Longmans Green & Co., 1935. pp. x, 451. 25*s*.

IT is a curious and pleasing coincidence that these two books should have been published within a few weeks of one another, because they are a demonstration of the increasing attention now being paid in this country to historical jurisprudence. In spite of the influence of a few great personalities English lawyers have not been distinguished for their interest in either the theory or the history of law. The practical lawyer considers these subjects 'academic', and no more damaging epithet could be applied to them. Nevertheless there are many signs that this mental attitude is being insensibly modified, and books of this character are a demonstration of the fact.

Their subjects are to some extent different, and it must be added that their merits are by no means equal. Dr Robson's work is entitled Civilisation and the Growth of Law, but its subject-matter is not so wide as the title would imply. The theorem underlying it is that there are definite relations between the ideas of mankind about the Universe in general and their ideas upon law and government; that legal and political institutions have been influenced by cosmic ideas; and that law has exercised a reciprocal influence upon philosophy, religion, and science. The subject does not lend itself to very definite treatment; but an indefinity seems to hang over Dr Robson's book that is not entirely attributable to its matter. Matthew Arnold once spoke of F. D. Maurice in something like these words: 'He spent his life beating the bush with deep emotion, without once ever succeeding in starting the hare'. Dr Robson never seems to get his hare started and his book leaves a lack of impression on the mind. It contains a great deal of interesting and relevant matter, the exposition is clear and adequate, but the chapters just stop, and one never seems to arrive.

This may be due to the fact that Dr Robson has not succeeded entirely in making up his own mind. There is an illustration of this as early as the second chapter. This deals with the origins of law, and the brevity of the exposition is a just measure of our ignorance of the subject. In this chapter the author quotes with apparent approval the views of Professor Malinowski as set forth in *Crime and Custom in Savage Society*.

' We must ', he says, ' abandon the idea of an inert solid crust and cake of custom pressing rigidly on tribal life from outside. Law and order arise out of the very processes which they govern. The assumption of mechanical and slavish obedience to custom by savages is entirely false ' (p. 12).

' There must be ', observes Professor Malinowski, ' in all societies a class of rules too practical to be backed up by religious sanctions, too burdensome to be left to mere goodwill, too personally vital to individuals to be enforced by any abstract agency. This is the domain of legal rules ' (p. 13).

Then in the succeeding chapters Dr Robson proceeds to discuss the relations of early law with magic and religion upon the general lines expounded by Maine and his followers. For example :—

' Since law in early society is generally believed to have come directly from God, it would seem likely that we should find no clear dividing line between law and religion. . . In the early ages of mankind, law and religion were often so closely interwoven that it is scarcely possible to say where one begins and the other leaves off ' (p. 38).

In these later chapters there appear to be no further references to Malinowski, and it does not seem to have occurred to the author that the two views flatly contradict one another. Either Maine or Malinowski is right, but they cannot both be right.

In fact Dr Robson's book (as it appears to the present writer) suffers from two weaknesses. The first is an insufficient appreciation of the method and results of archaeology. Those indefinite words ' early ' and ' primitive ' are of constant occurrence, and there seems to be no clear differentiation of the periods of human culture. Consequently illustrations are gathered from peoples who were really living in different stages of development, and are used indifferently as examples of primitive conditions. It is as if a geologist were to gather fossils from both the lias and the mountain limestone, and use them both as examples of primitive life. If the lawyer is to disinter the stratification of legal rules, he must first clear his ideas on the stratification of human

society, and must recognize that ' primitive ' is no longer a word of precision.

In the second place, all partial attempts to explain the relations of human society suffer from their partiality, however necessary such division may be on account of the infirmity of the human mind. The general principle of the relativity of law may be taken as established. We no longer regard law as a thing in itself, much less as an emanation of the divine ; but it is a product of the whole environment of the society, economic, political, geographical and mental, in which it has its being. But there are grave opportunities for error in separating one influence from the totality of all the influences. It may be necessary to do so in order to make a thesis manageable, but the danger of exaggerating the particular influence selected is great. If the principle of the influence of man's cosmic ideas upon law has any great validity it should be examined in more detail and perhaps in a smaller field. It may then be found that economic or cultural conditions really account for things that might otherwise be attributed to cosmic ideas. One does not find that a practical lawyer dealing with a concrete case pays any great attention to the Universe with a capital U.

In one respect it is most unfortunate for Dr Robson that Mr Diamond's book should have been published at the same time. The whole of the first part of Dr Robson's work is concerned with the close relationship between early law and religion ; and the whole of the first part of Mr Diamond's in demonstrating that the alleged connexion has no existence.

We do not hesitate to say that PRIMITIVE LAW is the most important work that has been published on its subject during the present century, and its ramifications extend so far beyond the technicalities of legal studies, that we make no apology for discussing it at some length in the pages of ANTIQUITY.

The first part of the book is the clearing of the foundations, the second the erection of the new building. In the first part Mr Diamond seeks to demolish the theory of the religious origin of law, and takes as his target the early chapters of Maine's *Ancient Law*. Maine's theory was that ' in the beginning ' rules of law, religion and morality were not differentiated ; that at later stages of mental progress these several things were gradually and painfully separated from one another ; but that early law always retained from its association with religion a love of formalism and technicalities. Mr Diamond will have none of

this. His view is that primitive law was entirely secular and free from formalism, and that the evidences ' show a clear picture of true primitive law giving way, in the course of time, to rules of mixed law and religion ' (p. 63). In other words the admixture of law and religion is the second stage, not the first, and is due to the power obtained by organized religion administered by a priestly hierarchy.

Perhaps an unrepentant Victorian may suggest that in this matter the author is hardly fair to the greatest of our historical jurists. He treats Maine in effect, though not in words, as a contemporary writer. The real difference may be attributed to the ambiguity of that unfortunate word ' primitive '. Maine's *Ancient Law* was published in 1861, but was founded on lectures delivered at Cambridge during the previous decade. At that time anthropology was an infant science—in fact its adolescence can be dated conveniently from the publication of Tylor's *Early History of Mankind* in 1865. Now it is quite easy, in spite of his deliberate habit of clearing away his scaffolding, to infer Maine's sources. They consisted of classical literature, the Barbarian Codes, the Laws of Manu, and occasionally the Old Testament.[1] In *Ancient Law* at least he never quotes from the usages of any savage tribe, because such evidence was not available for him. The Code of Hammurabi, the laws of Gortyn, the Babylonian and Assyrian texts, had not been discovered, and the Viking sagas had not been properly edited. The society of the Homeric poems was ' primitive ' to Maine, but is not so to Mr Diamond and ourselves. As Maine himself hints, his theories ' may be considered as true, if not of all mankind, at all events of all branches of the Indo-European family of nations ' (*Ancient Law*, p. 11). The differences between Maine and Mr Diamond are differences of aspect, not of principle. The strata of civilization from which Maine drew his modest and tentative picture of primitive man are to Mr Diamond no longer primitive. The point is quite obvious and it is a pity that Mr Diamond never mentions it.

However that may be, Mr Diamond's demolition of the religious theory is extremely thorough and competent. It would be out of place to give any details here, and it must suffice to say that he produces an extensive body of evidence to prove that in the earlier times to which records extend, legal rules and procedure were secular,[2] and that the

[1] The textual study of the Old Testament and of other authorities was then in a quite unadvanced condition. It is possible that Maine inferred the early admixture of religion, law and morality from the Ten Commandments.

[2] For example, the king sitting in the gate to determine disputes.

religious influence was a later accretion. Here is a challenge of the most definite and positive character, and anthropologists must survey the evidence afresh in the light of it.

The second and constructive portion of Mr Diamond's book is a history, necessarily in outline, of the development of primitive law. In it, the author, rightly or wrongly, has tied himself down to a strict and rigid theory. He correlates the development of law to the material or economic position of the peoples concerned at all times and in all places. He does not say that the rules observed by different peoples on the same cultural plane are identical in detail, but that the main features, which cover the greater part of the field of law, are always the same. Human development is tabulated in a neat scheme in which the two hunting peoples, the First and Second Hunters, form one line ; the First and Second Pastoralists, another ; but the main line is the agricultural divided into three principal stages, A_1, A_2, and A_3. After the third agricultural grade, from which the greater part of the evidence is gathered, comes the period of Codes. This is subdivided into Early Middle and Late, and the Middle period is again subdivided into Early Middle, Central Middle and Late Middle. Every one of these stages has its appropriate legal system which is conditioned and controlled by the level of material development, but is in its main features the same for all societies on the same material plane. The author then proceeds to work this out in detail for each of the principal sub-divisions of the field of law.

It would need a large book, and a competence and knowledge at least as great as Mr Diamond's, to criticize a scheme so revolutionary and comprehensive. All that can be attempted here is to set forth a few observations that occur upon a first perusal.

The scheme seems too tidy to be true. Nature is a terribly untidy old lady ; life is an untidy business from beginning to end ; and as every historian knows, his chief difficulty is to reduce any period to any kind of order. A scheme like this, almost German in its beautiful neatness, makes one suspicious from that very fact. In every scientific discussion the important matters are the exceptions to an alleged rule, and Mr Diamond is somewhat inclined to ignore them.

To take an example. Mr Diamond treats the important subject of inheritance as springing out of the law of marriage. It is an excellent example of his insight that he should do so. It is very well worked out upon the two systems of patrilineal and matrilineal descent corresponding to patrilocal and matrilocal marriage. Suddenly the author comes

across a formidable exception. It is the system of ultimogeniture, or the succession of the youngest son, which by an historical accident has acquired in English law the curious name of Borough English. The system is widespread, though neither its origin nor its geographical distribution have yet been determined satisfactorily. It will not fit into Mr Diamond's system in any manner, and he has evidently not studied it at all. He merely refers to it in a footnote in these terms (p. 238) :—

> ' Perhaps equally strange is the rule of Borough English, by which, until the other day, land in certain boroughs descended to the youngest son '.

This is not even accurate because ultimogeniture in England is not confined to ' certain boroughs ' but has a wider distribution as a local custom of descent ; and furthermore it is not a scientific procedure to relegate a major difficulty to a footnote. Mr Diamond has made many criticisms of Maine who wrote in 1861 : his own treatment of ultimogeniture has not advanced beyond that of Blackstone who wrote in 1761.

The English lawyer will at least be surprised at the place occupied by his own law in this neat system. He will learn that, without possessing any code after the Conquest, it reached the period of the Central Middle Codes about 1075 (Domesday, 1086). So rapid was the development that it had advanced to the Late Middle Codes, corresponding to the Pentateuch, by 1160, and in another twenty-five years, by 1185, it had reached the stage of the Twelve Tables. Sixty-five years later it had passed through the whole period of the late Codes, reaching the level of the Assyrian laws by 1220 (Magna Carta 1215) and that of the Code of Hammurabi (1914 B.C.) by 1250. At that point the history of primitive law ends and that of mature law begins. Yet the whole of this astonishing and breathless movement has been entirely hidden from the eyes of our most competent legal historians like Maitland, Sir Frederick Pollock, and Sir William Holdsworth. In their ignorance they have treated the whole of it under the one rubric of the Feudal Laws. It would be instructive, as it would certainly be entertaining to hear the views of a competent medievalist upon this comparative view. If it is to be accepted our ideas must be revised from the foundation upwards. This at least can be said with confidence, that it has never yet entered the mind of anyone to call the great and comprehensive work of Bracton (*c.* 1250–6) a treatise on primitive law, nor to classify Magna Carta as a document of that character. To such lengths can an acute mind be driven by the limitations of a rigid theory.

The question of geographical control does not enter into Mr Diamond's scheme at all. No doubt he would contend that the facts of geography are merely conditions of material development. At least he treats all his primitive peoples from all parts of the world as passing through the same stages of material culture, and therefore the same stages of legal development. Unless the work of the geographers has been greatly misconceived this must be a simplification obtained at the expense of accuracy. A West African native obtaining an easy living by tropical agriculture may be to outward seeming at the same stage of material development as a Highland crofter maintaining a miserable existence by incessant toil. But no one who regards the facts of life instead of the requirements of a theory would place them in the same category. There are regions of abundance, of plenty, of effort, and of misery ; regions of isolation and of good communications, and to treat factors of climate, soil and situation as irrelevant details is surely to darken counsel. Consideration of geographical control does not produce neat results, but to suppose that truth is always neat may be no more than a superstition of the logicians.

Mr Diamond (p. 180) does not exclude the influence of a higher civilization upon a lower with which it comes into contact, but in working out the details he treats that influence as almost negligible. The standard example of such an influence is that of the Mediterranean civilization upon the barbarian invaders of the Roman Empire. Of the influence of the lower culture upon the higher there is abundant evidence in the progressive deterioration that took place during the centuries of the ' Decline and Fall ' when the barbarian pressure was constantly increasing. The question at issue is whether the barbarians progressed in legal ideas purely on account of the stages that they successively attained in material culture ; or whether they borrowed from the civilization with which they were in close contact. Much of it they could not borrow because it was above them, or, in other words, their borrowings were limited by their power of assimilation. It is beyond doubt, as the author rightly points out, that the rediscovery of the Digest of Justinian and the rise of the school of the Glossators at Bologna under the leadership of Irnerius at the beginning of the twelfth century was an event of capital importance in the history of European civilization ; but it is quite another matter to assume that this was a sudden revolution unheralded by any previous development.

In other directions we know that the barbarians borrowed much. Carlyle's *History of Medieval Political Theory in the West* is little else

than a history of such borrowings. The Church preserved all that it wished to preserve of the classical authors and tradition. Our own Venerable Bede, writing in the darkest of the Dark Ages, owes everything except his own genius to the remembrance of the ancient world. Is it then reasonable to assume that in the important department of law nothing was borrowed ? The great German jurist Savigny devoted his chief work to prove the exact contrary, and since his time the steady influence of Roman law upon barbarian usage has been an accepted fact.[3] If he wishes to upset this conclusion Mr Diamond will be faced with the results of a century of careful scholarship. Once the fact of borrowing is admitted, the whole of his conclusions as to Europe in the Dark and Early Middle Ages will need revision, because the native growths must be separated from the borrowings, and until that has been done no certain conclusions can be drawn.

In presenting these disjointed observations we have no wish to detract from the great merit of Mr Diamond's work. A book so original invites and deserves criticism, and all honour is due to an author who has the courage and scholarship to produce a new synthesis of legal history. It deserves to be a landmark in the studies to which it relates.

[3] The most accessible work in English is the volume entitled *General Survey* in the Continental Legal History series. There is an admirable chapter by Professor H. D. Hazeltine entitled ' Roman and Canon Law in the Middle Ages ' in the *Cambridge Medieval History*, vol. v.

The Work of Giants

by O. G. S. Crawford

'I see you are hedging. That's what all the people complain of. You are hedging in all the country'.—Jack the Tinkeard.

OF their kind there are few things more beautiful than the field-walls in a stony country. They are constructed, as a rule, without mortar, and for that reason are called 'dry stone walls'; the term is useful, as a distinction, and will serve, but many of them are reinforced by an admixture of earth, or of a kind of daub that sets fairly hard. The walls of the moister West Country are the most beautiful of all, for innumerable plants take root in the earthy crevices and enrich the lovely grey stonework with a natural ornament that is entirely pleasing. Vivid green splashes of pennywort, yellow stars of celandine, clusters of violet, and the twisted white cords of ivy are Nature's version of carved vine-scrolls and interlaced designs, with the added beauty of colour. Far be it from me to institute odious comparisons between the works of Man and of Nature; both are good to look upon, and I yield to none in admiration of the masterpieces of Anglian sculpture. But these, alas, are few and far between; they are not always accessible or easily seen; whereas there are, by way of compensation, hundreds of miles of most enchanting field-walls in Cornwall alone. I began my study of them without fully realizing their aesthetic qualities; when my eyes were opened I found it difficult to look at anything else.

At first I did not realize the amazing variety of types that occur within a small area. To a great extent the type is determined by the natural character of the stone that occurs in the district. Obviously in a slate country the walls will be different from those in granite regions; but even within the granite region there is endless variety. The walls may consist of huge 'grounders' whose triangular interstices are filled with smaller stones (PLATE II); but these may be laid flat or edgewise. The latter method is a modern innovation, and its presence is a sure sign of recent work; but I do not know when it was first introduced. Some walls are entirely built in this way, from bottom to top; such are likely

PLATE I

RAMPART-WALL OF ROUNDAGO, CASTALLACK

Ph. O. G. S. Crawford

facing p. 162

to be quite modern, though the rapid growth of lichen and plants gives them a deceptive, if pleasing, air of antiquity (PLATE III). Walls in the West age quickly but live long.

The ' grounders ' are often of huge dimensions and represent the boulders that were strewn over the surface before it was first cleared.[1] No one deliberately goes in search of such huge rocks to make a mere field-wall ; at any rate he does not go far. Smaller stones, such as are always available close at hand, would serve the purpose just as well, and often were used exclusively. In some parts it is quite usual to find every wall[2] built with grounders set close together along the whole length. The labour involved must have been considerable, and it has a corollary ; no one will lightly destroy such a wall. Alterations may be made here and there ; small fields may sometimes be converted into large ones by the destruction of an intervening wall. But the original plan will persist. This is a safe assumption, and it is borne out by the disposition of the modern fields round the Iron Age village of Chysauster (parish of Gulval). Here, as has already been pointed out, are small lyncheted cultivation-plots (probably gardens) adjacent to the huts ; but there are also larger ones, divided by walls full of grounders. The amount of lyncheting is considerable, and testifies to a very long period of cultivation, down into modern times. There was, it is true, a farm here as early as 1313 (called Chysalvestre, the house of Sylvester),[3] and it might be argued that the lynchets were first brought into being by the ploughing of one Sylvester in the Middle Ages. But I do not think so. For although the (presumed) prehistoric lynchets coincide for the most part with the modern field-boundaries, they do not invariably do so. There are traces of ancient lynchets running across some of the modern fields, indicating (as we anticipated above) an enlargement of the field ; and there is at least one big lynchet below an uncultivated area which has the appearance of having been waste land for a very long time. Moreover the shapes of the fields that lie at a distance from the prehistoric village are different and suggest a different, later, design.

I had hoped, in the first moments of enthusiasm, to find some criterion by which to distinguish really ancient field-walls from later

[1] See *Popular Romances of the West of England*, by Robert Hunt, 3rd edn., 1881, p. 56, note. I have made extensive use of this delightful and fascinating book, and shall refer to it in later references by the author's name only.

[2] Hunt calls them ' hedges ', a local term and in many ways a better one ; but the modern connotation of ' hedge ' is narrower, and I have therefore not used it here.

[3] Hencken, *Archaeology of Cornwall and Scilly*, 1932, p. 133.

ones, but on the whole I was not successful. One feature, however, seems to be a fairly trustworthy indication of age. Walls which contain grounders beneath a confused and massive pile of collapsing material seem likely to be very ancient—partly, of course, because walls tend gradually to disintegrate, partly because a wall of substantial bulk may reasonably be assumed to date from the original clearing of the area. When such ' collapsed ' walls occur (as in the St. Ives district) in a region of old settlement, we may adopt the working hypothesis that they may be, in part at any rate, prehistoric.

On stony ground the process of collapse is assisted by the formation of negative lynchets which undercut the foundations, causing subsidence. The wall then assumes a dilapidated aspect, is full of repair-patches, and becomes in part a retaining wall for the soil above. This is a noticeable feature of most of the modern fields round Chysauster, some of which probably enclose the same areas as the ancient ones (PLATES IV, V).

A study of the six-inch Ordnance Maps of western Cornwall reveals certain interesting features about the field-systems. In certain regions the fields are of irregular shape, the walls are never geometrically straight and are usually curved, and the area enclosed tends to be a small one. In others the pattern approximates to a rectangular lay-out, and the walls are geometrically straight. Compare, for instance, the fields on the Atlantic foreland between St. Ives and Zennor (Cornwall, sheets 61 SW, SE ; FIG. 1) with those on Connor Downs (62 SE) and Treswithian Downs (62 NE). Or, within the same area and geological formation, compare the rigid framework recently imposed upon Lady Downs and Conquer Downs, and the plainly modern enclosures of Georgia, with those of Amalveor, Embla, Foage, Bodrifty (68 NW), Mulfra and Chysauster (68 SW ; FIG. 2) In the case of Amalveor and Embla we seem to have a progression marked by sweeping curves of intake from the downs ; and it looks as if, after the area thus taken in had been demarcated by a boundary-wall, it was then gradually cut up into smaller fields.

I do not suggest that the irregular system is prehistoric or even that it is as old as medieval times in every case, merely that it is older than the rectangular lay-out. In a group of irregular fields, moreover, the oldest walls will presumably be those of the first big intake and of the smaller fields within it—those nearest to the original settlement. If that settlement was founded in prehistoric times then the walls of the home closes will be, presumably, of prehistoric origin. I have already given reasons for believing that this holds good at Chysauster, where the

present farm has moved a quarter of a mile southwards. If, on the other hand, the original settlement was first founded in the Dark Ages

FIG. 1. FIELDS AT ZENNOR
(from O.S. 6 in. Cornwall 61 SW, and 68 NW, by permission of H.M.S.O.)

or later, on previously uncultivated land, none of the walls will be of older date.

The problem stated thus has, however, a misleading appearance of simplicity. We know very little about the dates when the farms and villages of Cornwall were founded. Villages compounded with Lan- are believed to represent monastic foundations. ' Mr Henderson believes that of the 254 Cornish parishes at the present day no less than 98 are the descendants of Celtic monastic foundations, and the total number of monasteries was far greater '.[4] Some of them may have been refoundations on older sites, and the field-walls would then have merely been adapted, not razed. Moreover, some monastic sites may not have survived as inhabited places. ' Since the monks of the 6th and 7th centuries lived in groups of huts surrounded by a rampart in the prehistoric way, the rest of the population probably did so too, which means that some of the forts which have been provisionally assigned to the Iron Age may belong to this time. It is conceivable also that a few may be the outer walls of long forgotten monasteries. A possible example is an oval fortification at the entrance to the Helford River in which stands the church of Mawnan parish '.[5]

On the gorse-covered downs of Penwith the process of clearance and enclosure is still going on. There is still plenty of open unenclosed moorland, and a recent incident goes far to prove my case, if the facts are to be accepted.[6] On the farm of Amalveor in Towednack a piece of land was being brought under cultivation and for this purpose an old decayed bank was being destroyed. This bank consisted of earth and stones and may have represented a turf wall built on stone foundations, or with layers of turf alternating with stones, as is done today. In this old bank was found a small hoard of gold ornaments of the Middle or Late Bronze Age.[7] Now it is obvious that they cannot have been hidden there before the bank was made ; therefore the bank must have been at least as old as the Bronze Age.[8] At the time of my visit another old bank was being destroyed, and it seems likely that these represent prehistoric field-boundaries. Since the area enclosed within them is very small the farmer is getting rid of them—he is in fact making just such a minor alteration as I predicted above (p. 163). It should be noted however that these banks are now of very small dimensions, and the labour of clearance therefore slight.

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[4] Hencken, 233.

[5] Hencken, 236.

[6] They have, however, been disputed.

[7] Hencken, 287.

[8] Unless, as is possible, they were found and rehidden in modern times ; but personally I do not think this at all probable, nor is it supported by evidence.

The gradual encroachment of enclosure upon the waste can be seen on the map of Amalveor nearly as well as at Embla, because there is

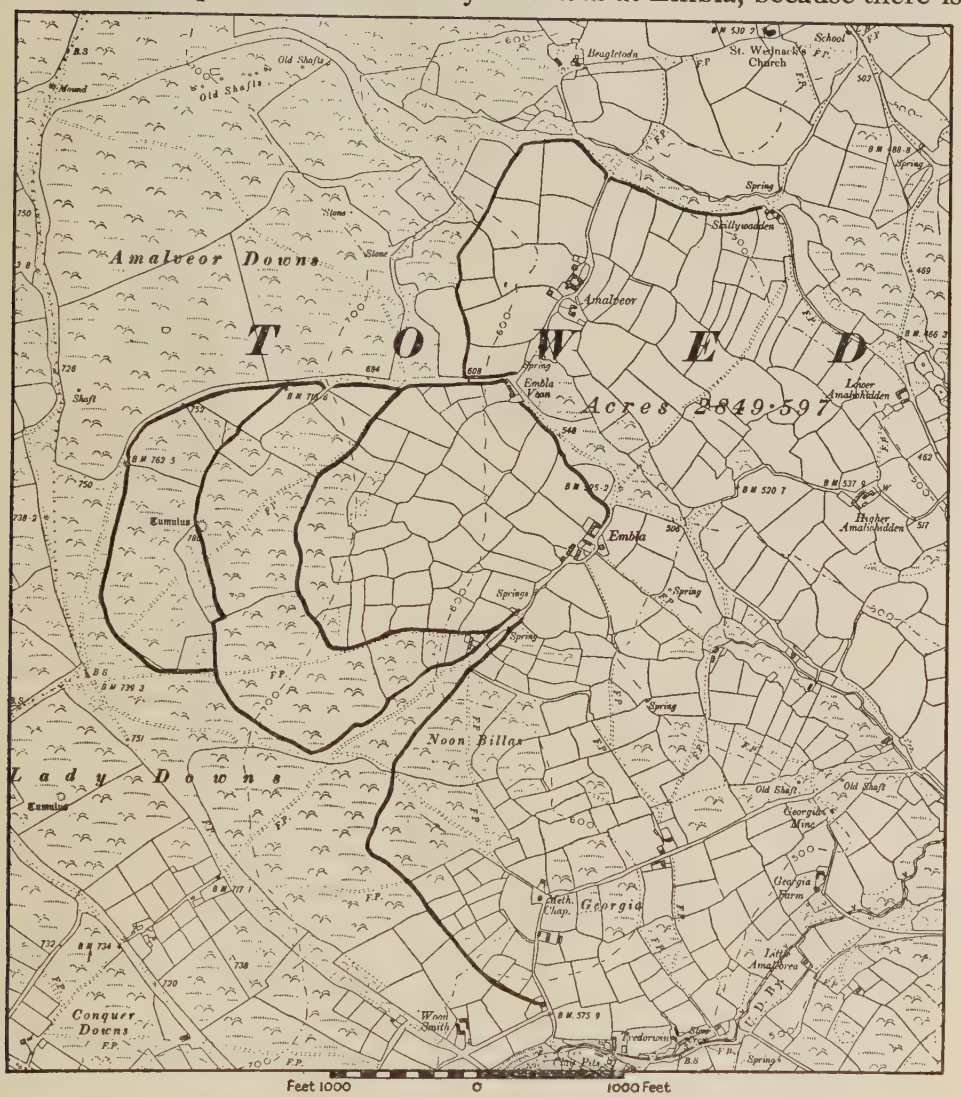


FIG. 2. INTAKES, AMALVEOR, EMBLA, GEORGIA, IN THE PARISH OF TOWEDNACK
(from O.S. 6 in. Cornwall 68 NW, by permission of H.M.S.O.)

still much moorland remaining unenclosed. It can be inferred in regions where enclosure is now complete, from the existence of long,

continuous, curved walls, enclosing a large area. Such may be seen north of Castallack in Paul, for instance (FIG. 3). When was this line of wall laid out ? There is nothing remarkably ancient about it, though it is mainly megalithic and may be of any age. It seems to start from a Roundago[9] which has every appearance of antiquity (PLATE I). The wall of the Roundago itself is of exceptional interest and beauty, and contains examples of grounders, of what may be the remains of upright gate-posts, and of flat-bedded masonry. Close by on a piece of rough ground are the remains of buildings too much overgrown to be seen properly but certainly ancient, and probably prehistoric ; while across the road, near a quarry, are several small lyncheted enclosures and rows of grounders, the remains of ancient dividing-walls. It looks as if the long enclosing wall belonged to the Roundago ; but close by is a farm with the ancient name of Castallack, and we must beware of rash conclusions.

If, however, the field-systems adjacent to other Rounds are examined, there will be found similar long lines of continuous walling, centring apparently on the Round itself. In every case another explanation is possible, but I am inclined to think that the number of coincidences is at any rate enough to justify the working hypothesis I have put forward—that these large intakes were perhaps the sheep and cattle ranches of the Round-builders.

We are not without precise knowledge of prehistoric field-walls. The grounders of some still survive in various parts of Cornwall and in the Scilly Isles (as on Bryher). On the southern slopes of Mulfra Hill are many rows of stones (PLATE VI), including one whose grounders are set in a low bank which runs right up to Mulfra Quoit, a megalithic burial-chamber on the top of the hill. These, I think, undoubtedly mark the boundaries of the fields belonging to the villagers whose huts are still to be seen lower down the hill. The bank may represent the decayed remnants of the turves and smaller stones forming the wall.[10] What is required, here and elsewhere, is a series of air-photographs showing the plan of this ancient field-system and its relation to the

[9] This term, and that of ' Round ', is commonly used in Cornwall to describe the small circular enclosures that are so common everywhere. They are believed to be of prehistoric date, but have not been proved so by excavation. Some of them, however, differ only from such structures as Chun in respect of state of preservation.

[10] If so the almost complete disappearance of the covering mound or cairn of Mulfra Quoit would be explained ; it was used as a quarry for wall-stones by the prehistoric (Iron Age ?) villagers.

PLATE II

FIELD-WALL AT TRENDRINE, NEAR ZENNOR
Ph. O. G. S. Crawford

facing p. 168

PLATE III

FIELD-WALL AT BOSWEDNACK, ZENNOR

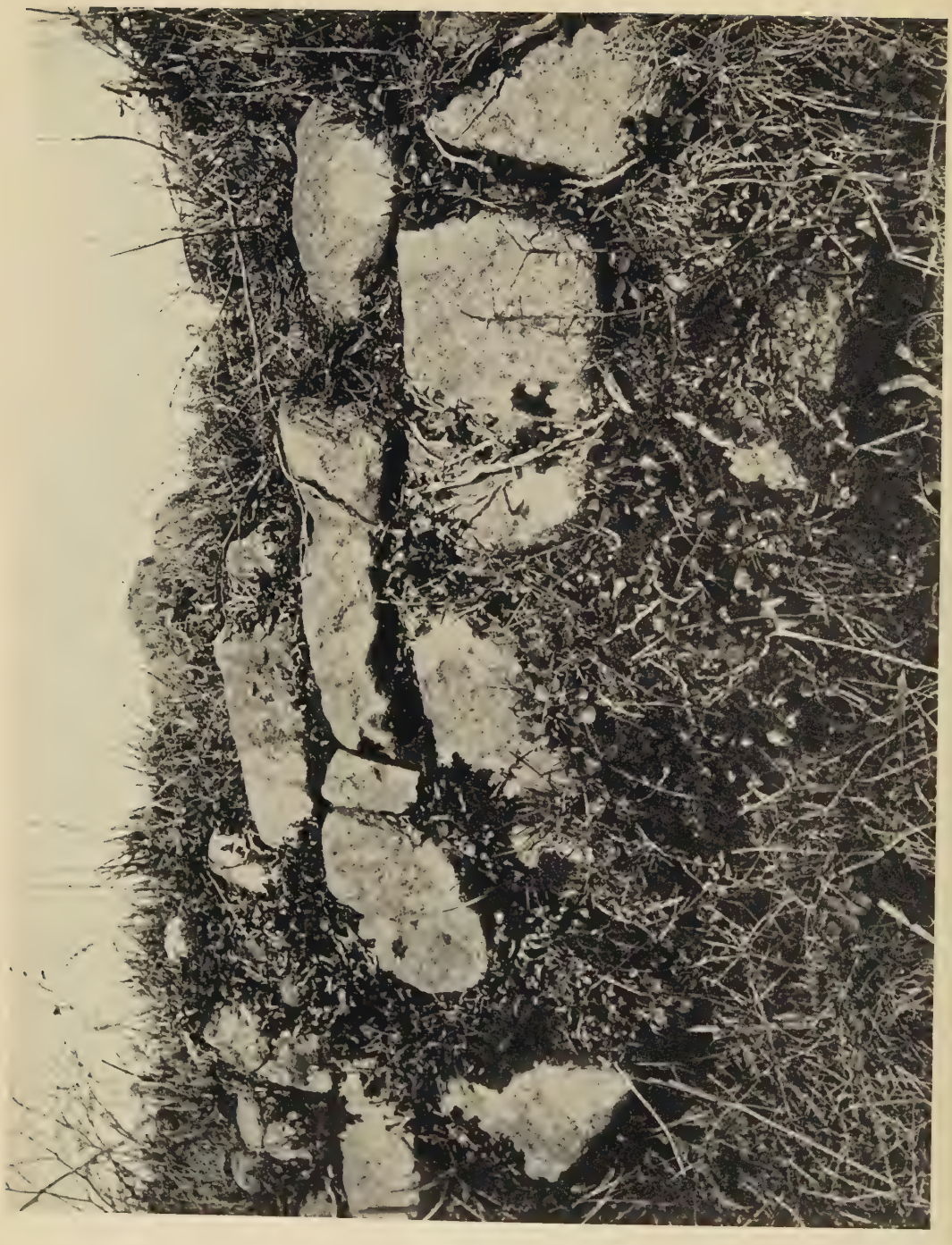
Ph. O. G. S. Crawford

PLATE IV

LYNCHET-WALL BETWEEN CHYSAUSTER AND CARNAQUIDDEN

Ph. O. G. S. Crawford

PLATE V



OLD MASSIVE WALLING IN LAVICINO FORTRESS

PLATE VI

ROW OF GROUNDERS OF ANCIENT-FIELD WALL, MULFRA HILL, MADRON

Ph. O. G. S. Crawford

PLATE VII

MODERN FIELD-WALL OF STONE ALTERNATING WITH TURF, ROSEWORTHY FARM, GWINEAR

Ph. O. G. S. Crawford

RUINS OF BUILDING OF STONE AND EARTH ON ROAD BETWEEN TOWNSHEND AND PRAZE, PARISH OF ST. ERTH

Ph. O. G. S. Crawford

OLD WALL ON THE OUTSKIRTS OF ST. IVES, SHOWING METHOD OF CONSTRUCTION
Ph. O. G. S. Crawford

modern one where the two impinge. But the conditions governing successful air-photography here are exceptionally exacting, and there is unfortunately no immediate prospect of satisfying them.

There is a continuity in the peasant culture of the West Country that is lacking in the east, where the footprints of the invader have left a more lasting impression. No invader seems to have troubled much about Cornwall since prehistoric times ; at any rate neither Roman, Saxon, Dane or Norman did much to alter the fundamental facts of

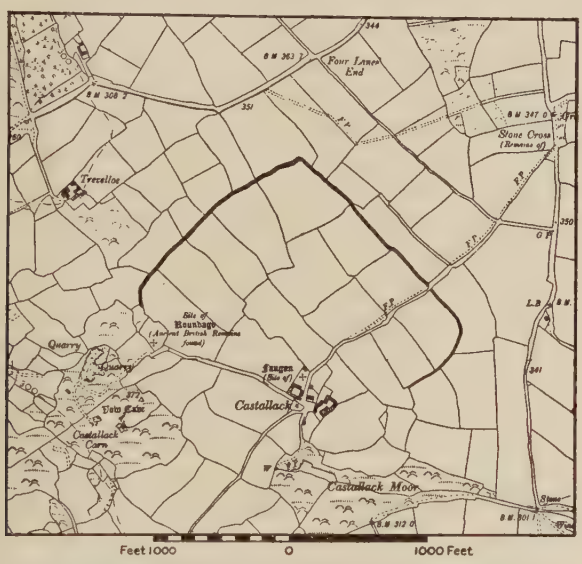


FIG. 3. ANCIENT REMAINS AT CASTALLACK, PARISH OF PAUL
(from O.S. 6 in. Cornwall 74 SW, and 79 NW, by permission of H.M.S.O.)

its life.[11] The modern hill-top villages of Madron, Ludgvan, and some ports such as Hayle and Marazion, may well have had an unbroken

[11] This raises an interesting problem. Which, in the long run, produces the greater effect, alters the mode of life more fundamentally—an invasion or an economic factor, such as an effective demand for a commodity ? Much of the modern life of the Cornish countryside is determined by the demand for tin, flowers and cabbages. The demand for early spring flowers is revolutionizing the field-system of the Scilly Isles, as it has already revolutionized the life of the cultivators. The price of tin affects the life of every miner and of those who supply him with goods. In the past the commercial prosperity of Cornwall must have been dependent upon the demand for tin. It must also have been influenced by the activity of intercourse along the western sea-ways. Here invasions of the east of England would have an indirect and stimulating effect. But such matters lie outside the scope of the present article.

existence of more than two millennia. Who is to say how many prehistoric villages have been gradually obliterated by the continuous occupation of a site ? How many Rounds are hidden in the walls of modern fields ? Continuity of settlement implies some continuity of the accompanying agricultural system. As long as the conditions of country life remain constant, so long will the field-system remain constant also ; the need for expansion, when it arises, has been met by enclosure of the waste.

Whatever may be the real truth about continuity of settlement—and the ideas here set down are admittedly speculative—there can be no doubt about the continuity of the craft of wall-making. It is still very much alive and practised in accordance with traditional methods. (A good example of recent work is to be seen on PLATE VII). These methods vary in every district in conformity with the materials employed, and we may well presume that the more perishable components, turf, earth and mud-mortar, were used also in prehistoric times. Indeed remains of such mortar still survive in the (Bronze Age) chambered barrows of the Scilly Isles,[12] and the ancient walls of Amalveor and Mulfra may have been partly made of turf.[13] With the aid of constructive imagination (if a mere 'professional archaeologist' may be allowed its possession !) it is not difficult to visualize the appearance of the countryside in ' megalithic ' times and later. Has full scope been given, for instance, to the prehistoric use of ' clob '[14] walls ? It was quite common, until recently, for the walls of houses to be made of clob upon a basis of a few courses of stone-work. Perfect examples are not easy to find nowadays, or to photograph when found (because the stonework is generally hidden under whitewash and plaster). I have therefore chosen a ruined building as an illustration (PLATE VIII). When in complete ruin, such a building would become an almost formless mass of earth and stone rubble, for then the mud-mortar would not hold the stones in position for long. The excavator might hardly suspect that he was excavating a house ! Some acquaintance with the modern usage is thus both instructive and helpful, when projected into the past.

[12] Hencken, 24.

[13] Turf walls were once common in the almost stoneless South of England where they were erected round intakes from the waste, the turf being pared off the surface as a necessary prelude to cultivation ; this is exactly paralleled in the west by the use of grounders dragged from the field and used in the walls.

[14] ' Clob ' consists of the local earthy clay with a liberal admixture of the local stone broken into small angular fragments. It is the Cornish equivalent of the familiar mud walls of the Wessex cottages.

The craft of ' hedging ' has lasted unbroken and without essential modifications since the Bronze Age at least ; the craft of the builder of what are called ' primitive ' structures[15] is only recently extinct. It is therefore not surprising that this continuity should also be evident in folk-lore and legend. Some fragments were collected more than a century ago by Dr Robert Hunt, from whose book the following remarks are all taken.

Giants have left their mark on almost every rock and carn of the extreme west. Their ' places ' were the prehistoric hill-forts of Carn Brea, Treryn, Trencrom, and Pencair, and there were giants at St. Ives and St. Michael's Mount. They were particularly active, it seems, in the region between St. Ives and Marazion. (Is this an echo of traffic along an isthmus road ?) The giant of St. Michael's Mount was called Cormelian or Cormoran. (Is this a corruption of Cunomoron ?) The giant of Treryn ' was chief of a numerous band, and by his daring he held possession, against the giants of the Mount, of all the lands west of Penzance '.[16] But perhaps the most interesting giant in the present connexion is Tom, the giant-killer, who lived ' somewhere westward of Hayle, probably in Lelant '.[17] He was a great eater and worker, but lazy ; ' occasionally Tom would have an industrious fit ; then, if he found any of his neighbours hedging, he would turn to and roll in all the largest rocks from over the fields, for " grounders " '. Tom eventually got a job as the driver of a brewer's wain, and went to live at Marazion, where the brewery was. One day, as he was going to deliver beer at St. Ives he helped some men by lifting a tree single-handed on to a ' draw '. ' The feat was performed in Ludgvan Lees, and a little farther on was a giant's place diverting the road, which should have gone straight to St. Ives but for it. This place was hedged in with great rocks, which no ten men of these times could move. They call them Giant's Hedges to the present day. There was a gate on that side of the giant's farm which was nearest Market-Jew (Marazion), and another on that side which joined the highway leading on to St. Ives. Tom looked at the gate for some time, half disposed to drive through, but eventually he decided on proceeding by the ordinary road. When, however, Tom was coming back from St. Ives with his empty wain, his courage screwed up by the influence of some three or

[15] Another article, or a note, may deal with survivals of such primitive structures today in Cornwall ; they consist for the most part of pig-styes, goose-houses, cow-sheds and derelict buildings, out in the fields, whose purpose has been forgotten.

[16] Hunt, 48. [17] Hunt, 55 ff.

four gallons of strong beer which he had drunk ', he decided that ' the king's highway ought not to be twisting and turning like an angle-twitch ' (worm) and went boldly on. He opened the gate and drove his oxen through. ' On went Tom, without seeing anything of the giant or of anybody else, except the fat cattle of all sorts in the fields. After driving about a mile, Tom came to a pair of gates in a high wall, which was close to and surrounding the giant's castle. There was no passing round those, as deep ditches, full of water, were on either side of these gates. So at them went Tom. The huge gates creaked on their hangings, and the wheels of Tom's wain rattled over the causey. A little ugly midgan of a cur began to bark, and out tore the giant, a great ugly unshapely fellow, all head and stomach '. With Tom's further adventures, diverting though they are, we are not now concerned. Suffice that, after an exchange of courtesies, they had a fight and Tom killed the Giant, who, liking his bold enemy, bequeathed him all his possessions with his last dying breath (rather an unnecessary formality, it seems, on such an occasion !). Amongst them were ' heaps of gold, silver, copper and tin down in the vaults of the castle, guarded by two dogs called Catchem and Tearem. ' There is more head of oxen, cows, sheep, goats and deer, than thee canst count ' ; and his final injunction was one characteristic of a megalith-builder—' take them all, only bury me decent '.

It would be most improper to treat this delightful romance as if it were authentic history. It is not coherent or even consistent with other tales of the same kind, and all we can expect of it is an occasional glimpse of a vanished past. Moreover we must remember that the peasant sees the whole of the past in a single plane, as it were, without perspective ; it is just the time before his own ; ' Them ere rocks were put there afore you nor me was boern or thoft ov ; but who don it es a puzler to everybody in Zennor. I de bleve theze put up theer wen thes ere wurld was maade ; but wether they was or no don't very much mattur by hal akounts '.[18] Tom may have been a composite character, blended from class-conscious rebels of feudal times and prehistoric merchants on the trans-peninsular route. The giant Blunderbuss, his victim, may have been a cross between a feudal lord and some earlier brigand who robbed those merchants. The account of the giant's castle, however, has a prehistoric ring. Note for example that it was

[18] Hunt, 176 (Zennor Quoit).

a mile from the first gate to the second, which was double and had a wet ditch[19] on either side and led straight to the castle. Between the two there was no sign of the giant but only ' the fat cattle of all sorts in the fields' . This is strongly suggestive of that great outer enclosure

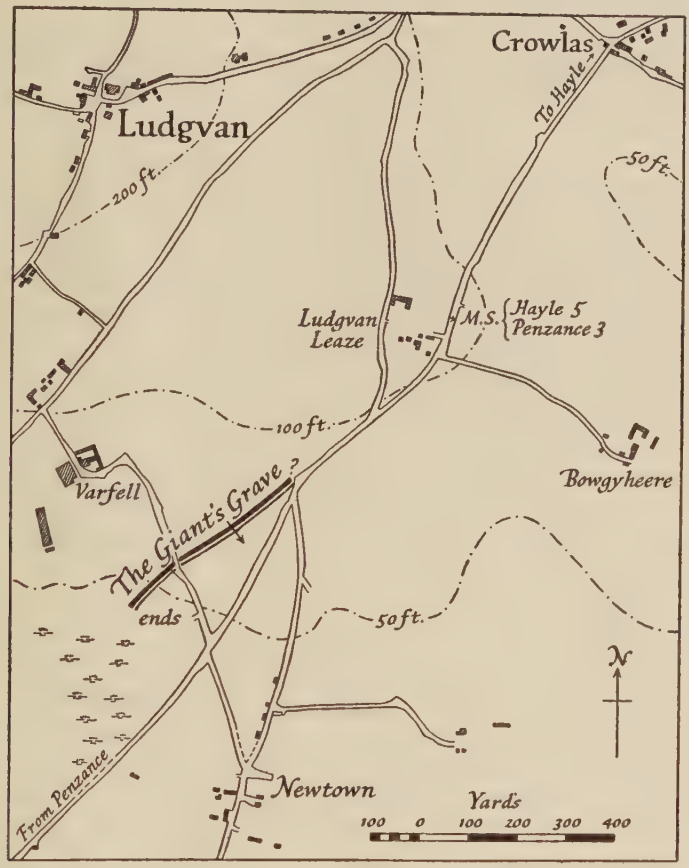


FIG. 4. LINEAR EARTHWORK CALLED 'THE GIANT'S GRAVE'
(Based on O.S. 6 in. Cornwall 68 SE, by permission of H.M.S.O.)

of the waste that we suspected was attached to the ' rounds ', such as Castallack (see above, p. 168–9). The existence of cattle-enclosures attached to prehistoric settlements has long been recognized, but they

[19] It is possible that the ditches of Chun Castle contained water. See R. A. Smith in *Archaeologia*, LXXVI, 240.

have usually been much smaller affairs, cattle-folds rather than, as here, ranches.[20] But there must have been ranches, and I have always believed the linear earthworks of Salisbury Plain to have served the purpose of delimiting them.[21] There too we have, on a larger scale, the succession of village, arable and pasture.

It seems that it was the hedge of the giant's cattle-ranch that blocked the St. Ives road. It lay beyond Ludgvan Lees, that is to say, on the north or St. Ives side of it. The name Ludgvan Lees still survives, applied to an old farm half a mile southeast of the village of Ludgvan. Now it is remarkable that on the *other* side of Ludgvan Lees there is a hitherto unrecognized linear earthwork called the Giant's Grave (FIG. 4). It consists of a huge earthen bank, still some five feet high in places, with a ditch on the south-eastern side. The surviving portion is a quarter of a mile long. The south-western end rests on unreclaimed boggy ground with a stream running through it, just south of the farm called Varfell. It runs into the main Penzance–St. Ives road and is lost where the road from Newtown comes in from the south. (At the time of my visit last March the main road here had recently been widened, and the old surface-line under the bank was plainly visible). Was this the earthwork that Tom encountered? If it was, the theory of a cattle-ranch here becomes untenable, for the Giant's Grave is obviously a defensive affair like the Grim's ditches of central and eastern England.

So far as names go the evidence is equally inconclusive. The name of Giant's *Grave* indicates that the same sort of tale was told of it as of Bolster Bank in St. Agnes, and the Hack and Cast in Goran.[22] On the other hand, the Giant's Hedge, between the creeks of Looe and Lerryn (Fowey) is an earthwork of exactly the same kind as Bolster Bank and the Giant's Grave, and the name connects it with the tale of Tom and Blunderbuss. There we must leave the matter, content at least to have added a third to the two known defensive linear earthworks of Cornwall.

The work of giants in the west is done for ever, but the hedges remain, more beautiful than their makers were, ' by hal akounts ' !

---

[20] See the instance at Köln-Lindenthal, ANTIQUITY, 1936, X, 89–93.

[21] See the Ordnance Survey Map of Celtic Fields of Salisbury Plain, 1 : 25,000. Old Sarum Sheet, 1934.

[22] Hunt, 75–6. The Hack and Cast is rather a promontory fort than an earthwork of the longer kind.

Rock Paintings in the Libyan Desert

by W. B. Kennedy Shaw

'TIME', wrote Sir Thomas Browne, 'which antiquates antiquities, and hath an art to make dust of all things, hath yet spared these minor monuments'. The Nile Valley is full of major monuments—pyramids, tombs and temples; each expedition which goes into the Libyan Desert learns that it is well-filled with minor ones and remarkable among these are paintings and gravings on rocks.

Broadly speaking, most of the paintings have been found in or near the mountain mass of Gebel 'Uweinat,[1] and the incised pictures further south in the region of the Wadi Hawa, south of Bir Natrun.[2] One group of paintings had been found on the west side of the Gilf Kebir, a high sandstone plateau lying to the north of 'Uweinat, which stretches northwards from lat. 22° 30′ for 150 miles. In January 1935 a party of six (the late Colonel G. A. Strutt and Mrs Strutt, M. H. Mason, R. E. McEuen, R. N. Harding Newman and myself), using three Ford cars for their transport, was exploring the southeast part of this plateau and hoping to find, among other things, new rock-drawings. This part of the Gilf Kebir is cut up by wide, sandy valleys divided by still uneroded portions of the original table-land. At the head of one of these valleys and nearly on a level with the plateau top McEuen noticed a number of rock-shelters, in one of which Harding Newman found the paintings which are the subject of this paper (PLATE I). The site is in lat. 22° 58′, long. 25° 09′, 400 miles west of the Nile and 200 miles southeast of Kufara Oasis. The rock-shelter, 4–5 ft. high, and 15 yards across the mouth, runs back for about 6 yards into the hill and faces southeast. It is thus fairly well

[1] Those found by Hassanein and Kemal el Din are described by Breuil in *Revue Scientifique*, February 1928. Others at 'Ein Dua found by Almasy are admirably published by Caporiacco and Graziosi, *Le Pitture Rupestri di Ain Doua* (Florence, 1934). See also an article by the writer in ANTIQUITY, March 1934, pp. 63–72.

[2] Some are recorded by Newbold in ANTIQUITY, September 1928, 261–91.

sheltered from the prevailing northerly winds. Most groups of rock-paintings in the Libyan Desert, as Frobenius points out, have been found at existing water points, such as 'Ein Dua, or where there is a strong probability of there having been water in the past, but these are high up near the summit of the plateau. The mouth of the cave was partly blocked with drift sand but at the back, below the paintings, this was scoured down to the rock floor. We were unable to move all the sand but found nothing in it. In front there is a fall of 30–40 ft. and on this slope were a few fragments of hard, buff or red-brown pottery, some nondescript quartzite flakes and pieces of ostrich shell.

The paintings are on the sloping back wall of the cave and are in white and two shades of red. We copied them by tracing on transparent paper, by photographing, and used a colour tint card to determine the exact shade for reproduction later. Most of the figures illustrated here are photographs of pastel copies.

These paintings are closely paralleled by those at 'Ein Dua mentioned above. I have been fortunate in being able to show them to the Abbé Breuil and he assures me that they are the work of the same people. The pictures certainly represent domesticated animals ; this is clear from the collars or halters shown on some (nos. 8, 9, and 14) and from their spotted coats. The cattle are probably *Bos africanus*, of Predynastic and Old Kingdom times in Egypt, and later replaced by *Bos brachyceros*. The prominence given to the udders is noticeable and suggests that the production of milk was an important feature. The scene in no. 22 is found three or four times at 'Ein Dua though here we have a more complete picture. It seems to represent a cave or hut, from the roof of which hang various objects, with a woman seated within and a man standing outside. Since the paintings themselves are in a cave, one might expect the artists to have lived in and painted a cave also ; on the other hand objects would hang more easily from the roof of a hut. The two human figures resemble those at 'Ein Dua, where we find the same broad shoulders, slender waist and wide hips. The white garment falling from the waist is found there also, and again among the paintings from Karkur Talh at the east end of 'Uweinat which have been published by Frobenius.[3] The filiform figures of 20 and 21, however, find only one parallel at 'Ein Dua, and this, as Graziosi points out, is in turn similar to the eastern Spanish paintings. The latter, however, include no domesticated animals ;

[3] *Berliner Illustriete Zeitung*, 18 February 1934.

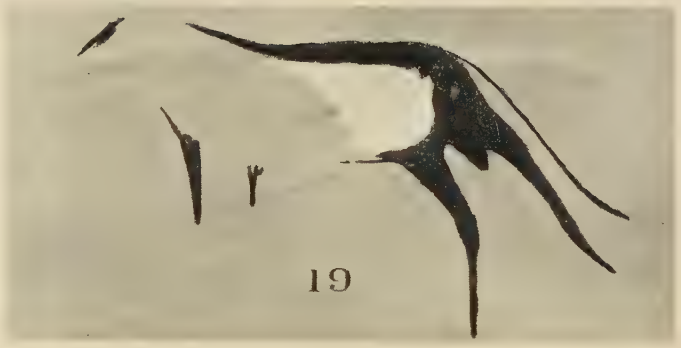
PLATE I

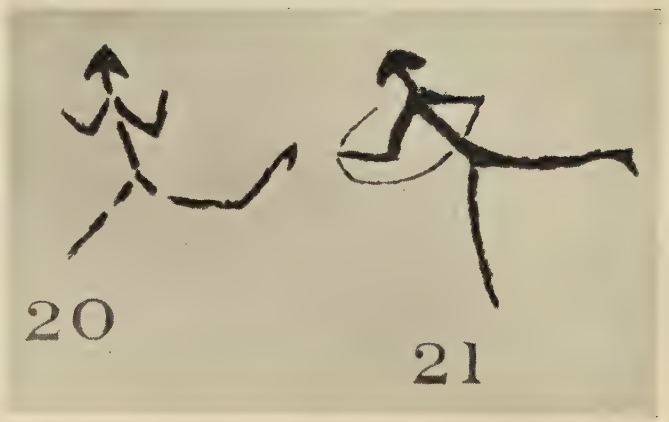
ROCK SHELTER, LIBYAN DESERT

facing p. 176

PLATE II

ROCK-PAINTING, LIBYAN DESERT





ROCK-PAINTINGS, LIBYAN DESERT

PLATE III

ROCK-PAINTINGS, LIBYAN DESERT

human figures and hunting scenes predominate. The mushroom-shaped heads seen here (20, 21) are found at Cogul in Spain and also at In Ezzan in the Algerian Sahara.[4]

Breuil finds a close resemblance between the 'Ein Dua paintings and others lately discovered near Harrar in Abyssinia.[5] He supposes that domestication of the animals represented there may first have taken place on the Abyssinian plateau, whence it spread westwards to the Nile Valley and beyond. One man at Harrar wields a bow exactly similar to those seen on the lion-hunt slate palette of Egyptian predynastic age.

To sum up, these Gilf Kebir paintings are probably the work of a pastoral people living about the date of the Egyptian predynastic period. They resemble closely the pictures at 'Ein Dua, which in turn have affinities with those at Harrar, and, through In Ezzan, with eastern Spain (Cogul, Alpera, Minateda) and with South Africa.

As it would obviously be of interest to learn something about the pigments used by these early artists we collected from a few of the more obscure pictures some specimens of the paint. Dr L. A. Jordan, of the Paint Research Station at Teddington, has kindly examined these for me, and reports as follows :—

> The results of the general analysis of the specimens of pigment are as follows :
>
> Red. Iron, aluminium and silica are present. It is easy to show that silica is present in two forms—one a crystalline variety derived from the sandstone backing and the other forming part of the coloured earthy material.
>
> White. Magnesium, a small amount of aluminium and silica are present. Again the silica is derived partly from the sandstone direct and partly from the earthy material.
>
> The composition of the red pigment is more or less what might be expected, corresponding to that of a burnt earth of which supplies were probably available locally. The composition of the white pigment, however, is a little more difficult to understand as it apparently contains no lime or gypsum type of material. Working with such small quantities, it is a little difficult to estimate the amount of each component but it would seem that the white pigment was a white clay.

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[4] *L'Anthropologie*, 1926, xxxvi, nos. 5–6.

[5] *L'Anthropologie*, 1934, xliv, nos. 5–6.

> I can find no trace of any medium such as might have been used as the cementing agent, and, indeed, I have been forced to the conclusion that the specimens contain no organic material whatever. The medium might have been some kind of fat or even wax imported into the region, and as you have yourself pointed out the Sudan is an area rich in products of the gum arabic type, though whether that was the case 6000 years ago is not for me to say. You will remember that I mentioned the name of Mr Noel Heaton who made some investigations on the Minoan paintings where an egg medium was used. I discussed the question of the egg medium with him and he expressed the view that the use of egg material here was unlikely but could not be ruled out entirely.

Graziosi[6] suggests, though not apparently as the result of an analysis, that some kind of fat was used as a vehicle for the pigment at 'Ein Dua. In the Egyptian tomb-paintings[7] the white pigment was generally whiting (carbonate of lime), but sometimes gypsum (sulphate of lime). For red a natural red ochre was the most common, a soft form of haematite containing a little clayey matter. Gum has been identified in use as a vehicle, and glue or gelatine may have been used. Lucas doubts the identification of white of egg as a medium and remarks that hens were not introduced into Egypt until a very late period. But it seems probable that the painters of the Gilf Kebir pictures could have used ostrich eggs. He quotes Russell that a red pigment of oxide of iron found at Medum could be applied mixed with water alone.

Burkitt[8], writing of South African paintings, suggests that gum, fat or the latex of *Euphorbia* may have been used as the vehicle.

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[6] *op. cit.*, p. 16.

[7] A Lucas, *Ancient Egyptian Materials*, ch. VI.

[8] M. C. Burkitt, *South Africa's Past in Stone and Paint*, p. 114.

Reculver*

by R. F. Jessup

THE twin towers of Reculver, a far-seen monument on the northeast coast of Kent 3½ miles east of Herne Bay (PLATE I), have long been recognized as a sea-mark of great antiquity. They were for many years maintained solely for the benefit of mariners using the shoal-beset inshore channels on the southern side of the Thames Estuary, but with the general disuse of these channels during the last decade such a guide-mark is no longer required.

The story of Reculver begins with the establishment, late in the 3rd century, of a Roman fort, which was a unit in the scheme designed for the defence of the Saxon Shore: there had, however, been a settlement of indeterminate nature here in the two preceding centuries. Then late in the 7th century a small Christian church was built within the ruined walls of the fort, and around it grew a monastic house which existed until the 10th century. After the Conquest, the building became the parish church of Reculver, and as the parish church it continued until the beginning of the 19th century when, as a consequence of the depleted population, it was abandoned. For many years after it remained a ruin (except for the towers), and in this condition it came into the care of the Office of Works in 1925. The purpose of this essay is chiefly to give some account of the Saxon church and the Roman fort, but it will be instructive to consider at the same time the changes which have taken place in the topography of the coast since Roman days.

By the terms of a widely accepted legend the towers, which are popularly known as ' The Sisters ' or ' The Reculvers ', were built or put into repair by one Frances, Abbess of Davington Priory, as a memorial to her twin sister Isabel who perished in a shipwreck on the Horse Sand off Reculver in the early years of the 16th century. A version of the story was indeed current about a hundred years after its supposed happening, and there may be a grain of truth in it, but in its usual form it is very largely the creation of William Henry Ireland,

* The Roman name was Regulbium (*Not. Dig. circa* 425) ' derived from an old British word for "beak, bill" . . . . with a prefix corresponding to Latin *prae* or *pro*, the name meaning " promontory" '. Ekwall, *Oxford Dictionary of English Place-names*, 1936, p.365. The projecting character of the land on which Reculver stands is now masked by the green meadows which on the south and east have replaced the tidal marsh and mud flats of earlier times.

who has better claim to be known as a notorious forger of Shakespearian manuscripts than as the author of the history of Kent in which the story with all its pseudo-historical detail first appears.[1] Subsequent topographers have not hesitated to make good use of the story for their own purpose, but it has not lost any of its popular appeal, even in face of the very pleasant alternative which Richard Barham sets before his readers in the *Ingoldsby Legends*.

The Reculver towers were actually built late in the 12th century, as their architecture clearly demonstrates. When Camden wrote his *Britannia* they were already regarded as a sea-mark, at any rate by the local people. That they were well-established and officially accepted as such by the middle of the 17th century is evident from a Minute dated 28 January 1662 in the records of the Corporation of Trinity House.[2] Here, the parishioners of Reculver petitioned the Corporation ' they would by Cirtifycate informe the Lord Bishopp of Canterbury the necessity that the steeple of Reculver were repaired in regard it is a very emminent seamarke '. The Corporation duly provided a certificate to this end, wherein it was stated that ' wch said steeples are very well knowne unto us to be soo emminent a sea-marke that the shipping to and from London cannot conveniently pass but with much detriment and hazzard '. The towers had evidently been in need of attention for some years previously, for in 1637 Archbishop Laud was enjoined to expedite the hearing of a cause then before him between the parishioners of Herne and those of Reculver, ' touching the repairs of the church and steeple of the church at Reculver '.

Lambarde, in his *Carde of the Beacons in Kent*, published in 1570, shows the towers of Reculver together with those of several other churches, but they are clearly not included as part of the beacon system, the inference being that they were used solely for a navigation light. This light could only have been a modest structure, a tar-bucket probably, which was placed in the towers at nightfall.

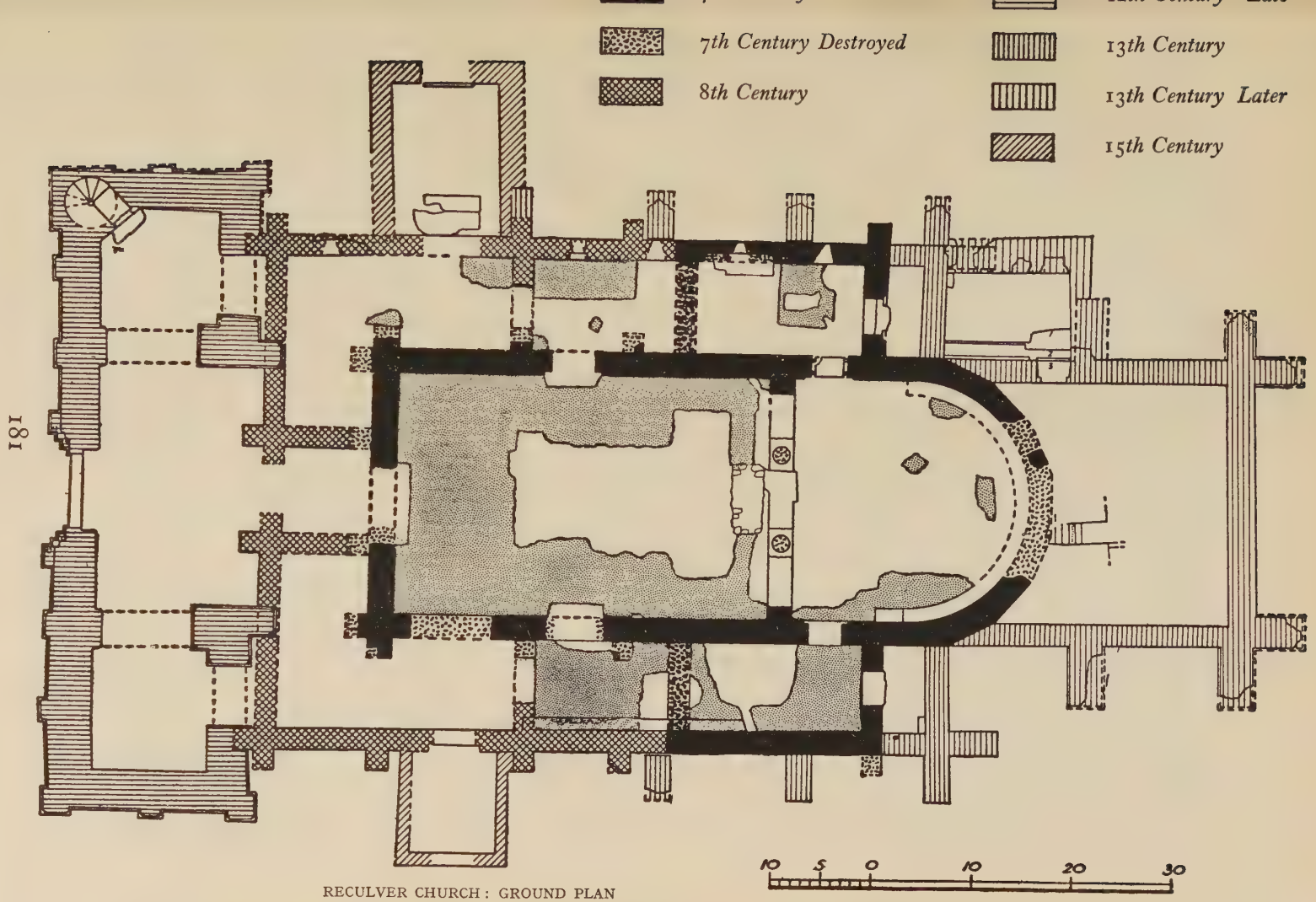
The Early Church

The first church at Reculver,[3] according to the Anglo-Saxon Chronicle, was founded in 669 by Egberht, King of Kent, who ' gave

[1] W. H. Ireland, *History of the County of Kent*, vol. 1 (1828), 427.

[2] The Corporation of Trinity House have been good enough to supply me with a copy of the Minute, an extract from which I reproduce with thanks for their courtesy.

[3] The only pagan Saxon relics from Reculver known to me are a lobed glass beaker, and a broken Kentish brooch.



RECULVER CHURCH: GROUND PLAN

to Bassa, a mass-priest, Reculver to build a minster upon ', and it was built (as also was the church of King Eadbald at Dover and the lonely chapel of St. Peter-on-the-Wall at Bradwell in Essex) within the ruined walls of a Roman fort. Its subsequent documentary history is not very full. The chief items of present concern in it are these. The building was completed and occupied by 679, for in that year King Lothar of Kent made a grant of land to the abbot of the monastery of Reculver. Eadberht of Kent was buried within its walls in 761, and it was for long popularly but incorrectly regarded as the burial place of Ethelbert himself. Between 817 and 825 it comes into prominence during the Mercian quarrels with Kent, when Coenwulf of Mercia, with an eye to obtaining a useful foothold in his former dependency, tried to help himself to land belonging to the monasteries of Minster and Reculver. Finally, in 949 the monastery and its possessions passed by the gift of King Eadred to the archbishopric of Canterbury and this is the last mention of the monastic house. In its later years it can scarcely have escaped the ravages of the Viking raiders who, a century before, had already wintered in the adjoining island of Thanet and overrun Sheppey.

After the Conquest the building, which no longer had a monastic character, served merely as a parish church, and in the 12th and 13th centuries considerable additions were made to the fabric. In 1805, for the reason already mentioned, it was desecrated, and sold for the stone it contained. The twin towers were allowed to remain standing in view of their importance to mariners, and subsequently they were sold to the lighthouse authorities of Trinity House. What was left of the church quickly fell into desolate ruin, from which it was rescued in 1925 when part of the site (including the Roman walls) came into the care of the Office of Works. Much of the plan and details of construction of the early church were recovered by clearing and excavation in 1927, and since that date more of the site has been gradually secured for preservation. Much careful restoration has been undertaken, and for the guidance of visitors the plan of the 7th century building (PLATE II) is now picked out on the ground in chalk, while the 8th century additions are indicated by large flint pebbles. The foundations themselves are protected by a covering of earth, and to its very great advantage the site has been laid out with turf.

Any account of the early church at Reculver must of necessity be largely indebted to a scholarly essay by Sir Charles Peers[4] and to

[4] ' Reculver : its Saxon Church and Cross ', *Archaeologia* (1927), LXXVII, 241.

Mr A. W. Clapham's well-known book on pre-conquest architecture,[5] and the following summary is derived mainly from these two authorities. The original church (PLATE II and p. 181), had an aisleless nave 37 feet in length and 24 feet in width, with an apsidal chancel polygonal on the outside but semi-circular within, a triple chancel arch of Roman bricks supported on two stout columns, and a rectangular porticus or chapel on each side of the nave marching in part with the chancel. In the northern porticus, the sills of the original inward-splayed windows still remain. The flooring, which was of thick mortar, rested on a foundation of flint, and it had a thin plaster surface coloured by crushed brick. So hard was this floor that when a Fellow of the Society of Antiquaries wanted to collect a piece as a specimen in 1782, the clerk of the church had very great difficulty in breaking it, even with a pickaxe. Much of the flint and stone rubble with which the walls were built had doubtless been obtained from the Roman fort, and Roman tiles were used for bonding. It will be noticed that the Roman walls stand to a remarkably uniform height which presumably represents the old ground-level within the fort,[6] and apparently the Saxon and medieval builders robbed the walls systematically to that level. In the 8th century the walls of the small chapels were extended westward and then returned across the west wall of the nave, so as to form a porch at the west door, together with a series of rooms surrounding the original nave. No structure occupied the usual place of the cloister on the northern side, and the little church was evidently a building apart from the remaining monastic offices, the position of which is not known.

This church at Reculver is one of a consistently planned group to be found in southeastern England, for the construction or rebuilding of which the Augustinian missionaries were responsible.* It seems likely that they reproduced in their work features of Christian churches which, built during the Roman period, had survived the pagan Saxon barbarism. The archetype of the group is the well-known apsidal building at Silchester which is said to be a Christian church of the Roman period. In design and execution Reculver has much in common with St. Andrews at Rochester, the missionary churches at Canterbury,

[5] A. W. Clapham, *English Romanesque Architecture before the Conquest* (1930), pp. 17, 62, etc.

[6] The present ground-level is a few feet above the walls; formerly the area within the Roman walls was a wheat field.

* See ANTIQUITY 1929, III, 65–74: 'The earliest Churches in England', by Sir Charles Peers.

Ethelburga's church at Lyminge, and St. Peter's at Bradwell in Essex,[7] and here it may be recalled that Bede mentions a traditional Roman origin for St. Martin's at Canterbury.

Apart from the building, two noteworthy relics of the Saxon church have survived. After the destruction of 1805, much of the old stonework was removed and built into the walls of a new church at Hillborough, a mile distant, but a great deal of it was sold to local buyers. Such was the fate of the two stone columns which supported the triple chancel-arch of the 7th century church. They were rediscovered years later half buried and forgotten in the grass of an orchard near Canterbury, and one of the capitals was rescued at much the same time from the stack-yard of a farm at Reculver. By the efforts of Dr Sheppard of Canterbury, the columns were reassembled and erected in the Precincts of Canterbury cathedral. They now stand within the cathedral itself, where they are well protected from the weather. As works of art, they have little to commend them. The clumsy capitals are set off only by a heavy tapering shaft 12 feet 4 inches high with cable moulding at the base, but possibly, as Sir Charles Peers has suggested, their ungainliness was relieved by paintwork, though no trace of this is now visible.[8]

The second surviving relic is a remarkable one, consisting of five pieces of a finely carved and painted cross-shaft. They are now placed on the window sills inside Hillborough church. Apparently the pieces had been built into the fabric of the old church and were found on its demolition ; a fragment of a cross-head and a small piece of shaft were also found on the site in later years. There are two well-authenticated references to a cross in the church of Reculver. A decree of Archbishop Winchelsey, dated from Reculver in 1296,[9] refers to the oblations and alms in a certain chest near the great stone cross between the ' church and the chancel at Reculver ' ; and John Leland on his visit about 1540 noted there ' Yn the enteryng of the Quyer ys one of the fayrest, and the most auncyent Crosse that ever I saw a ix. Footes,

[7] For details see Peers and Clapham, *Archaeologia* (1927), LXXVII, 204 ff.

[8] They were drawn *in situ* before the demolition ; see C. R. Smith, *Richborough, Reculver, and Lympne* (1850), p. 197 ; for the original drawings see Society of Antiquaries, *Red Portfolios*, Kent L–R, 24, 26. There is not much possibility of their having been part of the great monument at Richborough as suggested in *Arch. Cant.* (1932), XLIV, 170.

[9] Printed at length in Nichols' *Bibliotheca Topographica Britannica* (1784), no. XVIII, p. 133.

as I ges, yn highte. It standeth lyke a fayr Columne '.[10] It rested on a ' greate Stone ' which was plain, and its sculpture depicted Christ and the Apostles, the Passion, and the Crucifixion, and ' the hiest Part of the Pyller hath the Figure of a Crosse '. It bore also inscriptions painted in Roman capitals, and there may have been additional lettering engraved on metal strips countersunk in the stone. Now Sir Charles Peers in his examination of Reculver in 1927 found exactly ' yn the enteryng of the Quyer ' and immediately to the west of the chancel steps a stone foundation which he was able to show very convincingly to be contemporary with the plaster floor of the 7th century church, and it is eminently reasonable to suppose that this foundation was the one upon which Leland's cross was erected.

Four of the present pieces were part of a round shaft ; no two will fit together, but on the evidence of the sculpture they are all part of the same cross, although the only block which has interlaced work is 3 inches less in diameter than the others, all of which have a diameter calculated at 18 inches. A central dowel hole in several of the stones bears out Leland's description of a cross built up of a series of superimposed blocks. A sixth fragment, now in the possession of Canon G. M. Livett, F.S.A., Canterbury, is here published for the first time, with his kind permission (PLATE III).

The sculpture is executed skilfully enough, but in a severe way which recalls the work of Classical schools. With the one exception of simple interlaced work, it consists of draped human figures empanelled, and of vine-scrolls with human heads. In addition there are considerable traces of a background of reddish-brown paint. This colouring, which is best preserved in the panel of interlaced work, appears to be contemporary with the sculpture, and it may have been intended to supply a polychrome effect in contrast with the light grey stonework. Possibly the lettering painted in Roman capitals was a part of the same scheme. It is difficult to reconcile any of the pieces with Leland's description of the figures, but the largest piece, which bears four figures, may possibly represent Christ and the Apostles.

Although the Reculver cross is perfectly familiar to students and much has been said about it,[11] the origin of its admittedly alien work of the late 7th century is still obscure. It bears, of course, some

[10] Leland, *Itinerary* (3rd edition, 1770), VII, folio 136. Leland also saw a ' very auncient Boke of the Evangelyes ' with a stone inscribed CLAUDIA ATEPICCVS in the binding.

[11] In particular Mr Clapham has made an interesting suggestion (*op. cit.* p. 62) that the cross may have been in existence before the church.

relation to the sculpture on the famous Northumbrian cross at Ruthwell, and the Ruthwell cross, the stylistic position of which is fairly well agreed upon, has the added similarity of Roman lettering. Several pieces of the stone have been identified as of French origin,[12] and it is just possible that its sculptor was a foreigner who had been trained in a school which derived an attenuated inspiration from classical sources, and who worked in Britain under the patronage of Theodore of Tarsus, or of his colleagues Benedict Biscop and Hadrian.

Theodore ascended the episcopal throne at Canterbury in 678, a year before the church at Reculver was founded, and all three clerics brought with them to Britain much learning and love of art. Benedict, in particular, returned from his first journey to Gaul with several masons who were to build a church in the Roman style, a style which he greatly admired.[13] It is clear then that either of them was quite capable of setting up this magnificent rood-cross at Reculver ; but one would like very much to be able to point out a single monument in Gaul or anywhere else in Europe to place what can only be an attractive theory of possibility within the surer realm of probability. In the meantime, all that can safely be said is that the Reculver cross is in its technique more foreign than the Ruthwell cross, with which it is usually agreed to be contemporary.

Erosion of the Coast

The chief reasons advanced for the demolition of the church in 1805 were that it was in grave danger of collapse owing to the encroachment of the sea, and that the majority of the inhabitants had moved inland. The desertion of Reculver had, in fact, been in process for many years previously. In Camden's day it was ' nothing else but an uplandish country towne ', noted only for its savoury oysters and for the steeples of the church which ' shooting up their lofty spires stand the mariners in good stead as markes, whereby they avoid certain sandes and shelues in the Mouthe of the Tamis '.[14] William Lambarde, Kent's own topographer, wrote in 1570 that ' the present estate of

[12] The fragments at Hillborough have not been reported upon by a geologist, but I think there is no doubt that they are of the same stone as the pieces described by Sir Charles Peers.

[13] Bede, *Lives of the Holy Abbots*, Benedict.

[14] Camden, *Britannia* (1610), p. 335.

Reculvers (as you may see) deserveth not many wordes '.[15] From the earliest days, the constant and pronounced erosion of the sea coast at this spot has attracted attention and speculation. Leland (*op. cit.*) says that Reculver ' stondeth withyn a Quarter of a Myle or litle more of the Se Syde. The Towne at this tyme is but Village lyke . . . The old Building of the Chirch of the Abbay remayneth having ii goodly Spiring Steples '. His estimate of the distance between Reculver and the sea, which has often been called into question, is in point of fact not so very inaccurate : it may be confirmed from the chart of the Isle of Thanet noticed later.

By the courtesy of Mr Allington Collard of Reculver and Mr O. G. S. Crawford, I am enabled to reproduce here (page 189) imposed on a modern 6-inch map, a little-known manuscript map of three farms in the ' pareche of Reculluer ', made about 1630 by James Castell.[16] At that time it will be seen there was a considerable strip of land between the northern wall of the Roman fort and the sea cliff ; a note on the original map reads ' The Peice to ye Sea Shore caled iii Acres '. Mr Collard also possesses another manuscript map made by Thomas Hill in 1685, which contains a note to the effect that ' The Clift was further to the seaward then [than] now is, as you may reade in the Table of the Antiquities of the said place '. By 1781, when the Kentish historian Boys made his plan of Reculver,[17] only the north-eastern angle remained of the northern wall of the Roman fort, the rest having recently fallen. A drawing made in 1781 is reproduced in PLATE IV. The church originally stood approximately in the centre of the fort, and by 1810 the sea had encroached so far that the waves were almost washing over its walls ; it was in that year, when more than one-third of the area had been engulfed, that the Corporation of Trinity House at last complied with the repeated request of the inhabitants and erected protective works to prevent further inroads of the sea. A few years later, the present apron of stone and the groyne system (PLATES I and VI) were completed.

Although there is this considerable amount of information

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[15] W. Lambarde, *A Perambulation of Kent* (1576) ; 1826 edition, p. 235.

[16] Hill's map was reproduced in Roach Smith's *Richborough, Reculver, and Lympne* (1850). By Mr Collard's permisson there are photostat reproductions of both maps in the Map Room at the British Museum (3120,2 and 3120,3) ; and there is a copy of Castell's map on the site for the benefit of visitors.

[17] Society of Antiquaries, *Red Portfolios*, Kent L–R, 24, 25 ; published in Nichols' *Bibliotheca Topographica Britannica* (1784) no. XVIII, plate IV.

regarding the wastage of land within comparatively recent years, it is difficult to estimate the seaward extent of Reculver in Roman times.[18] The rate of erosion, which has been accelerated by the unresistant nature of the London Clay cliffs, is dependent upon tides and weather conditions generally, and is far from uniform. In one bad winter, that of 1808, 10 feet of land disappeared ; between 1780 and 1785 no less than 7½ feet were lost each year, and the average loss between 1630 and 1820 was approximately 2½ feet a year. There is also to be taken into account a possible post-Roman subsidence of the land surface and, for what it is worth, the persistent legend of a drowned Roman town off the Black Rock, though the latter might quite well be accounted for by the presence of a natural gravel spit (such as The Street at Whitstable, which has often been mis-called a Roman road), and by the pottery which has been washed out of the cliff and subsequently brought up in the fishermen's nets. On the other hand, a Roman building with a hypocaust and tesselated pavement stood considerably to the northward of the fort, between it and the sea ;[19] and if an average wastage of 5 feet a year be assumed, the Roman coastline might well have reached beyond the Black Rock Shoal, which is now ¾ mile northwest of Reculver. A note by Thomas Hill the 'sworne surveyer' on his map of 1685, says that in Roman days, the castle was ' neer a mile distance then from the sea ', a guess that may have been very near the truth.

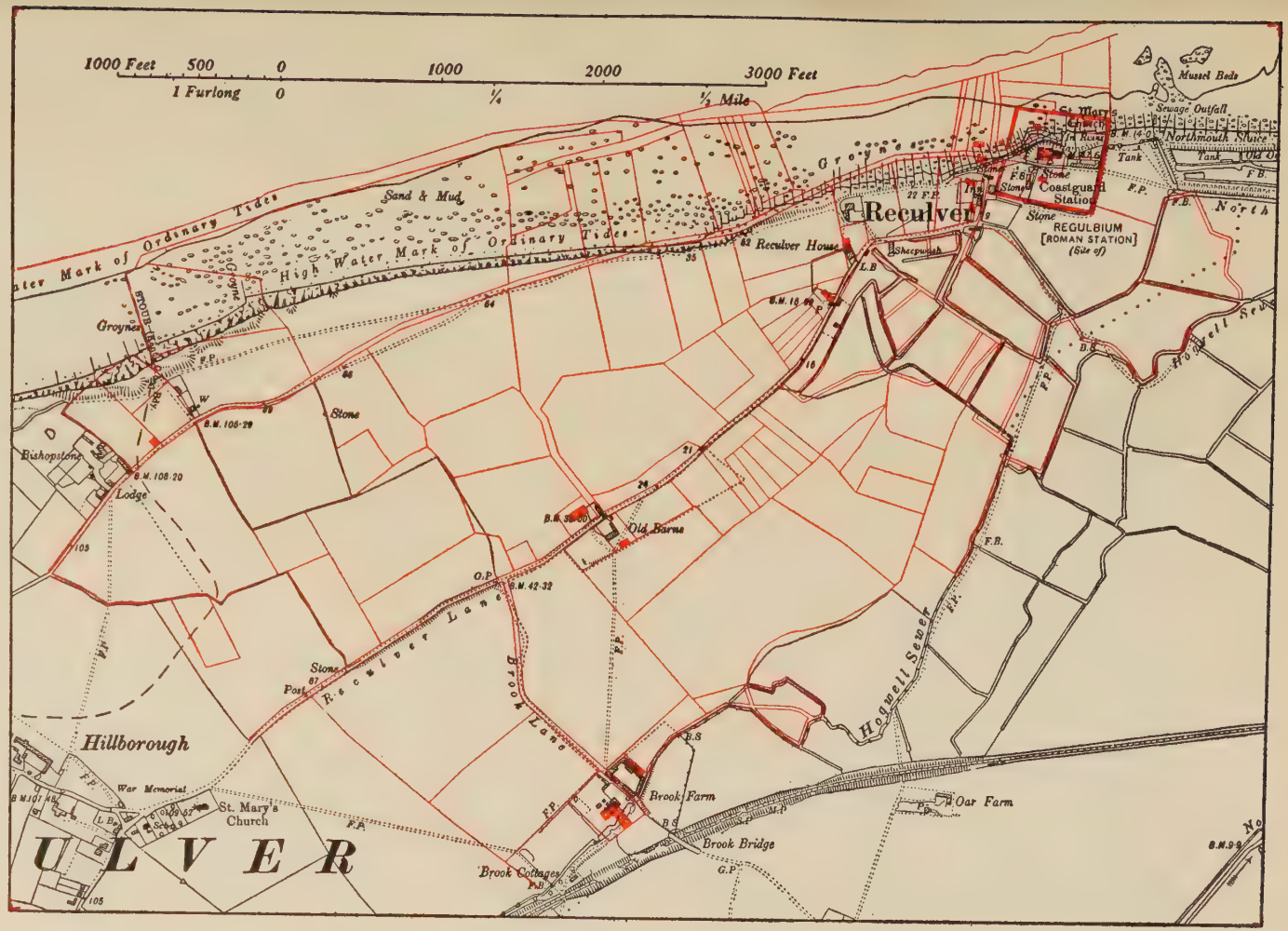
The Roman Fort

The Roman fort covers a small knoll which, rising to a maximum height of 50 feet, is the last seaward extension of the Blean Hills.[20] In its original condition the fort was almost square in shape, enclosing an area of some 7½ acres, with apparently one entrance only, but it is not certain whether this entrance was in the south or west wall. A large stretch of the walls is still to be seen. On the southern and eastern sides the core is fairly well preserved, standing to about half of its former height of 20 feet from the foundations, and a piece of the western wall (which is visible in PLATE I) is to be seen in the rear of the King Ethelbert public-house. At present the average thickness of the core is 8 feet, and the structure consists of flint and ragstone

[18] Ireland's legend of nine miles is, of course, absurd. Popular opinion, dating from the 17th century, places the town of Reculver on the Black Rock Shoal.

[19] J. Battely, *Antiquitates Rutupinae* (Oxford, 1711 in Latin), 1774 edition, p. 54.

[20] A detailed account of Roman Reculver will be found in *V.C.H. Kent*, III, 19–24.



RECULVER, ABOUT 1630 (*See* p. 187)

The red detail is from a manuscript map belonging to Mr Allington Collard of Reculver; the black detail is that of the 6-inch Ordnance Map, by permission

with occasional pieces of tufa and septaria, and it formerly had a facing of dressed ragstone (PLATE VII) the whole being raised on a slight foundation of beach pebbles sunk in the natural sand. Much the same features were to be seen in the sister fort at Richborough. By Boys' time the facing stones had been almost entirely removed by stone-robbers, and now only two imperfect courses remain about half way along the eastern wall (PLATE VII). On the outside of the southern wall, a pebble formation is well exposed (PLATE V) where the land surface has been considerably lowered by ploughing since Roman times ; the wall here has been underpinned to prevent further damage by subsidence. This lowering of the land surface has effectively removed any indications of the ditch system which, according to Gough, surrounded the fort.

An unusual feature noticed in 1878 and again by Major Gordon Home in 1927 is the presence of two inner offsets to the wall, and Major Home was able to prove the existence of an inner earthen ramp. Unlike most of the forts of the Saxon Shore, but in common with Brancaster, Reculver had rounded angles and no bastions, and there is an unexpected absence of bonding-tiles in the walls. These peculiar features in its construction have been brought forward to support a claim for an early date,[21] but until other and contrary evidence is forthcoming, we may still prefer to think that it was built at much the same time as the majority of the Saxon Shore forts which it closely resembles in general character, that is at the end of the 3rd century.

The early historians were quick to identify the pre-Conquest *Raculf* or *Raculfceastre* with the *Castellum Regulbium*, a station mentioned in the *Notitia Dignitatum*, a garrison list the British portion of which is thought to date early in the 5th century. It includes the tribune of the first cohort of Vetasians at Regulbium under the command of the Count of the Saxon Shore in Britain. The Vetasii or Betasii were a people living in that part of Gaul now called Brabant ; some of them served with the auxiliaries on the northern frontier of Britain in the 2nd century, but archaeology gives no corroboration of their presence at Reculver.

That there was an occupation of the site as early as the 1st century A.D. is proved by mint coins and pottery of that period. An additional piece of plausible evidence may be adduced in the existence of a well-aligned road of great antiquity which, following parish boundaries for

[21] As Mr R. G. Collingwood has emphasized, the probable narrow entrance and the stout walls are both against a 2nd century date. *Arch. Roman Britain* (1930), 54.

a large part of its course, connects Reculver with Canterbury by way of Hillborough, Maystreet Cross, Ford (where there was a mid-2nd century cemetery), Maypole, Buckwell, and Sturry. From Hillborough the road continued northward to Bishopstone where it is now represented by a field-path, and then eastward directly to what seems to be an original west gate of the fort: this road, the original eastern end of which has now fallen into the sea, is known as 'The King's Highway' on Hill's map. It fits well into the general plan of the Roman road-system in East Kent which was focussed entirely upon Canterbury, and if, as there is good reason to believe, the system was already in existence in the 1st century there is here some evidence in support of a 1st century date for the early settlement at Reculver.

A hint as to the nature of this early settlement may be given by the geographical situation of the site. It occupied a commanding position on the Genlade or Wantsum, which in Roman times was a wide and navigable watercourse separating the Island of Thanet from the mainland of Kent. It is well known that all the forts of the Saxon Shore had maritime connexions, and it seems that Reculver may have been established in that tradition long before the 3rd century system of defence was instituted. From the very beginning of the Flavian period there had been in existence the *Classis Britannica*,[22] a naval Channel patrol with its base at Boulogne and depots at Dover, Lympne, and probably Folkestone; and Reculver with a harbour on a tidal inlet would have made a convenient northern station for that fleet. The site was equally accessible for London shipping (already considerable in the 1st century), most of which no doubt preferred to use the sheltered Wantsum rather than to make a rough passage round the Foreland.

The main period of occupation, in spite of chance discoveries made at various times within the fort, is still obscure. Leland testifies that 'in digging abowte the Chyrch Yard they find old Bokels of Girdels and Ring . . . . . Ther hath bene much Romain mony fownd abowt Reculver'. Archdeacon Battely, the tutelary genius of Reculver, who wrote in 1711, describes and illustrates coins, pottery, and trinkets in his own large collection, the greater part of which he had purchased from the villagers.[23] These objects, by the circumstances of their collection, will not admit of a critical description. In 1878 Mr George Dowker made an inconclusive examination of the inner face of the

[22] An inscription of a trierarch at Boulogne dates from Nero's reign. (*Corpus Inscrip. Lat.*, XIII, 3542).

[23] John Battely, *op. cit.*

eastern wall for the Kent Archaeological Society,[24] and in 1927, Major Gordon Home was able to add to the coin list, confirm Dowker's description of the lower courses of the wall, and discover the existence of an inner earthen ramp. Equally meagre is the information regarding buildings inside the fort ; and an indeterminate red plastered and tiled house with a hypocaust, a bit of rough walling, and a 16-foot well, are the only structural vestiges of the interior arrangements of this, the third largest fort on the Saxon Shore.

The Wantsum Channel

The air-photograph (PLATE I) provides an excellent picture of the silted up northern mouth of the Genlade or Wantsum, the river which separated the Island of Thanet from the mainland of Kent. Bede described it as a river about three furlongs wide and fordable in two places only ' for both ends of it run into the sea ',[25] the other and southern mouth being near Sandwich. The monastery of Reculver, he noted, was situated near the northern mouth of the river Genlade.[26] At one period during its life the Northmouth itself had another branch known as New Haven, but Reculver was never an island as Battely imagined.

The site of the supposed Roman harbour falls just outside the right-hand limit of the picture. Immediately above the Towers may be seen the Northmouth Sluice, where the shrunken North Stream, the lingering descendant of Bede's Genlade, empties itself into the sea. The whole site of the Chislet Levels, which occupies the upper half of the plate, was formerly under water, forming a large shallow bay stretching as far east as Gore End, and the whole waterway between Sandwich on the south and Northmouth on the Thames coast was sufficiently deep to be used by seafarers. Two particular instances of its use during the Viking campaigns come to mind : in 876 the Danish sea army from East Anglia sailed down the Wantsum Channel on its way to take part in the invasion of Wessex ; and in 1052 Godwin and his son Harold proceeded from Sandwich through the Northmouth and so to London and King Edward.[27]

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[24] *Arch. Cant.* (1878), XII, 1–13.

[25] Bede, *Ecclesiastical History*, Book I, ch. XXV.

[26] Bede, *op. cit.* Book V, ch. VIII.

[27] The Wantsum channel seems therefore to have been used as a kind of maritime isthmus-route.—EDITOR.

PLATE I

RECULVER FROM THE AIR, 1928: WEST FRONT OF THE TWIN TOWERS
(a piece of the Roman wall, supported by four modern concrete piers, is visible behind the shed in foreground).
Royal Air Force Crown copyright reserved

facing p. 192

FOUNDATIONS OF THE EARLY CHURCH, RECULVER, SEEN FROM THE WESTERN TOWERS

Ph. O. G. S. Crawford

FRAGMENT OF RECULVER CROSS, NOW IN POSSESSION OF CANON G. M. LIVETT, F.S.A.
Ph. O. G. S. Crawford

Fig. 1. p. 163.
North East View of Reculver Church,
taken April 17th 1781.
a Chapel converted into a Cottage
b Heigh demolished by the Sea in 1780.
c Explosion of a Powder Mill at Faversham.
d Isle of Sheppey.

RECULVER FROM THE NORTHEAST IN 1781 SHOWING THE RUINED WALL OF THE ROMAN FORT

From Nichols' 'Bibliotheca Topographica Britannica'

PLATE IV

SOUTHERN WALL OF ROMAN FORT, RECULVER, SHOWING PEBBLE FOUNDATION RESTING ON NATURAL SAND

Ph. O. G. S. Crawford

RECULVER FROM THE NORTHEAST IN 1936, EASTERN WALL OF THE ROMAN FORT IN THE FOREGROUND

Ph. O. G. S. Crawford

EAST WALL OF ROMAN FORT, RECULVER, SHOWING FACING OF SQUARED BLOCKS
Ph. O. G. S. Crawford

At what date the silting of the Northmouth began is not known. The region was particularly well suited to the growth of marshland by reason of the double tide which became slack water near Sarre, thus favouring the deposition of the loamy soils brought down in quantity by the streams on the western bank of the river. In addition, the incoming north tide brought much clay from the constantly wasting cliffs of Herne.

There is no doubt that the southern course of the river between Fordwich and Sandwich remained open to navigation for much longer than the Northmouth. The Kentish topographers[28] relying on hearsay evidence quoted by an obscure Elizabethan author, described the Wantsum as being navigable for great merchant ships up to the end of the 15th century, but there is in fact good documentary evidence apart from a later passage in Leland[29] that the Northmouth was already well silted up by that date, and the southern course only can have been navigable. There is in the British Museum a coloured map of the Isle of Thanet and the adjoining mainland[30] which is of interest in this connexion. A stream near Reculver is marked ' stopped ', while a label on the Northmouth stream reads ' This channel ebbith and floweth hither ', that is, up to a wall or dam nearly two miles inland. Other dams are indications of a considered attempt to sewer and reclaim the land, an undertaking which met with success in the district round Sarre, for the chart is here marked ' the ould chanel but now plain ground '. Eastward of the Northmouth is a series of narrow but clear-cut sewers which is labelled ' Bishop Mortons Channells '. Morton, who was made Archbishop of Canterbury in 1486 and died in 1500, was much interested in land drainage schemes : his major work was the fenland dyke between Peterborough and Wisbech which still bears the name of Morton's Leam.

It may be that Sarre Wall, the dam which was built across the narrowest part of the valley between Sarre and Upstreet and which now carries the Canterbury–Thanet main road, was due to Morton, though the inhabitants of Thanet were empowered to build a bridge at Sarre in 1485.

For the rest, the air-photo shows in the distance the line of Chambers Wall, which runs from a point west of the hamlet called Bartletts to

[28] e.g. Hasted, *History of Kent*, folio edition, vol. IV (1799), 289. The story of the Wantsum is in vol. I (1778), CXXXI.

[29] Leland, *Itinerary* (3rd edition, 1770), VII, 137.

[30] MS. *Cott.* Aug. I, vol. I, 54.

Coldharbour, where the present stream of Wantsum reaches the sea. This wall was responsible for the reclamation of a large area in the eastern part of the channel. The prominent sea-walls about Reculver—that is, the Northern Wall along the coast to Coldharbour, and Rushbourne Wall which makes an inland loop between Northmouth Sluice and Knock Point,—were built late in the 18th century as the final stage in the closing of the Channel and the drainage of the Wantsum pasture-land.

In conclusion, I thank Mr O. G. S. Crawford for the great trouble he has taken in the matter of the illustrations, which were all specially taken by him for this article.

Both Editors and Author wish to thank Canon G. M. Livett, F.S.A., for permission to photograph and publish here (PLATE III) the fragment of the Reculver cross now in his possession ; and the Vicar of Reculver for kindly allowing the fragments (see page 184) at Hillborough church to be photographed. May we express a hope that some day these fragments may all find a home again in the church at Reculver where the cross once stood ?

Sheep

by Max Hilzheimer*

RECENT research has thrown considerable light on the history of the domestic sheep ; and even though much still remains obscure, we now have a good general idea of the region in which sheep were first domesticated, besides extensive knowledge of the original wild breeds.

One point is obvious. Domestication can only have occurred where the wild sheep already had its home. This at once excludes the whole of Africa, as the wild breed proper never existed there. For the maned sheep of North Africa, despite its name, is not really a sheep : to note only one or two points of difference, it lacks the sub-orbital face-gland, and its tail is flattened and bare on the underside, like that of a goat, instead of being cylindrical and completely covered with hair. The wild breed must certainly have existed in Europe, but on the mainland was already extinct before the end of the Glacial Epoch ; a small remnant established itself in Corsica and Sardinia and is represented today by the Mouflon of those islands. Therefore, unless we are to make the quite improbable and unsubstantiated assumption that a cultural advance took place in those isolated spots, Europe too is eliminated. Asia only is left; and even here, as we shall see, we must limit ourselves to the countries lying between the Mediterranean and the Pamirs, at least as far as the domestic sheep of Europe and Africa are concerned, though certain Asiatic types may have originated still further east.

With the exceptions already noted, the wild breeds are confined to Asia and to part of North America. Their home is ' the Holarctic region from Cyprus and Asia Minor eastward across central and northern Asia, and in western North America from Alaska to northern Mexico '. It should be noted that they are not found exclusively in the highest mountain-regions, as is often assumed, but appear also in the low-lying plains of Central Asia and of Siberia east of the Yenisei to the Polar Sea

* Translated by Roland G. Austin.

in the north. It is particularly significant that they descend to lower ground in this manner, in some cases to sea-level (as for example round the Caspian and Aral Seas, in Transcaspia and the Kirghiz Steppes) as well as in the south to the Salt Range of the Punjab, to Baluchistan, and to south Persia. For it must have been here, not among the mountain-summits, that the wild sheep were first domesticated.

Four distinct groups may be recognized, although there is not absolute certainty yet concerning the individual species.

(1) The Mouflon group. This is the group that has spread furthest westward; its best known representative is the Mouflon of Corsica and Sardinia, and its home stretches from Cyprus across Asia Minor as far as Persia. These are the smallest wild sheep, standing generally less than 30 inches at the withers, but sometimes reaching to 33 inches. A distinguishing feature of the whole group is the white saddle-patch on the old rams, which in one species (*ovis laristanica*) is even doubled, being divided by a dark band across the shoulders. Except for this, their colour in the upper parts is brownish red of various shades, with a dark flank-band at the point where the belly, which is whitish, begins. In the young lambs and the ewes the face is speckled with grey; in the old rams it is often pure white, and here again, in front of each eye, is a darker band. The adult rams of all types have a mane along the lower part of the throat, although in the case of the Mouflon it is short and feebly developed; in the *ovis laristanica* this mane is like a lion's, covering the whole throat and neck. The horns vary considerably in appearance. In the rams, as in all sheep, they are triangular in cross-section; but the outer anterior angle often tends to be blunted, and in the Cypriote species this tendency is carried so far that the horn becomes two-edged, like that of a goat. This latter formation is invariably found in such of the ewes as are horned, as occasionally happens with the Mouflon, although the Asiatic types are always hornless. The ram's horn forms a single spiral only; rarely, and that chiefly in the eastern breeds, is an incipient second spiral in evidence. In the Mouflon, the points of the horns are directed forwards or outwards; some rams, however, are found with horns pointed inwards, and this is the normal formation in the Asiatic *ovis orientalis*, in which breed it is only occasionally that the horns are directed outwards.

(2) The Vignei group, of which *ovis vignei* is typical. Their home is eastward of and adjacent to the regions inhabited by the Mouflon. In the north and west they are represented by the Steppe-sheep (*ovis arkal*), living between the Caspian Sea, the Sea of Aral and the Amu-darya; but

their habitat extends through Afghanistan and Baluchistan, Gilgit and the Punjab south of the Karakoram Mountains, as far as Ladak and Tibet. They are bigger than the Mouflon type, being some 36 inches in height at the shoulder, but like them in colour, although the brown tint of the upper parts is duller and with more grey ; and there is no white saddle-patch. The rams show a well-developed mane ; the horns have a prominent outer anterior angle, and the beginnings of a second spiral are in evidence ; although the points are normally directed inwards, in some cases they turn outwards. The ewes are always horned.

(3) The Argali group. These are found east and north of *ovis vignei*, from the Pamirs along the mountain-chains as far as western Kamchatka, and they descend to the plains between the Thian Shan range, the Sea of Aral, and Lake Balkash. They are the largest type of wild sheep ; some reach the great height of 48 inches at the shoulder. In winter their prevalent colour is a dark, dirty grey ; occasionally they have a dark band round the neck, and often too a broad stubby mane along the underside of the throat, sometimes a short erect one on the nape. Their horns are massive, and may reach a length of 75 inches along the curve, with a basal girth of as much as 17 inches, in the case of the *ovis Poli*. The points always turn distinctly outward, with strongly developed spirals, as for instance in *ovis Littledalei* or *ovis Poli*, where the beginning of a third spiral may often be seen. The ewes are always horned.

(4) The Bighorns, whose home stretches north to the Arctic Ocean and east from the Yenisei across to America. They derive their name from the formation of their horns, which are peculiarly short but very massive at the base ; the inner anterior angle is liable to be rounded off. Such a formation is not found in domesticated breeds, and therefore we need not consider the variety here, as for this and other reasons it may be taken to have no connexion with the ancestry of the domestic sheep.

The first three groups have probably each produced domestic descendants. They vary so much that they already present many characteristics familiar in the domestic sheep. Domestication, however, results in even greater diversity. Horns may be lacking in both rams and ewes, they may vary greatly in length, they may form either a narrow or a wide spiral, and to take an extreme instance, in the Wallachian sheep (*Zackelschaf*) they are exactly like a screw with a perpendicular axis. The ears may be very elongated and pendant, as in the Indian Dumba sheep ; sometimes they are entirely lacking, as in

certain of the Abyssinian broad-tails. Other new points resulting from domestication are as follows. The tail has become lengthened, often reaching beyond the hocks, whereas the tails of all wild breeds are short—the longest, that of the Steppe-sheep, being only four inches ; a fleece has developed ; there may be a deposit of fat on the hindquarters (' fat-rumped ' sheep) or on the tail (' broad-tails '), or on the nape of the neck (the Zunu from Angola) ; other types again have wattles on the throat. Such peculiarities have greatly helped the classification of the domestic breeds, so that distinctions are made, for instance, between the hairy and the woolly species, or the short-tailed and the long-tailed, the latter again being subdivided into those with lean and those with fat tails. But such comprehensive generic terms need not necessarily imply a racial connexion. For example, the fleece or the long tail may have been evolved independently in different varieties ; just as the lack of ears occurs independently in the sheep of Abyssinia, Scandinavia, and in the Shanghai breed in China. On the other hand, we are entitled to claim racial affinity where similar points are apparent in both wild and domestic breeds, although admittedly even that may be doubtful. Still, we cannot be far wrong in refusing to derive domestic sheep with unusually strong horns from wild breeds with slighter horns, since horns tend to diminish through domestication.

In this way Pallas long ago came to the conclusion that the Asiatic fat-rumped sheep derived from the Argali ; I agree with his theory, especially in view of the massive nature of their horns, which are often welded together at the base. To this class belong also certain short-tailed Tibetan breeds, although they are not fat-rumped, among which the Hunia, standing 30–32 inches at the shoulder, is remarkable for its size. Many of them have more than one pair of horns. Like their close relatives, the Silinga sheep, they are used as baggage-animals for the transport of salt and borax, each beast being able to carry as much as 40 pounds weight. In the adjoining regions to the south is found the Barwal, likewise short-tailed, with remarkably strong horns fused together at the base. These horns, and their powerful build, make them admirably fitted to be fighting animals, for which purpose they are exported to the Punjab. By artificial treatment of the horns, these Barwals are turned into the so-called unicorn sheep of Tibet. Beyond this we know nothing of the history and age of the descendants of the Argali.

Let us now turn to the western breeds. Here the sheep is among the very earliest of domesticated animals. In Europe its remains are

found in the Danish kitchen-middens and in the lake-dwellings of Switzerland, at the very outset of the Neolithic age. In Egypt they certainly go back to the second prehistoric culture, the period of the red-figured vessels, and in Mesopotamia they date from the Jemdet-Nasr culture.

We may start with Mesopotamia, as showing the near beginnings if not the actual origin of sheep-breeding. In the Jemdet-Nasr period we already find three breeds—a fleecy, a broad-tail, and a hairy sheep. The last-named is probably the most primitive, and most closely related to the wild breed : it has not developed a fleece, and still has the hairy coat of the wild animal ; the rams too have a thick mane. The tail is already slightly elongated, reaching to the knee-joints. The horns have altered, forming corkscrew-shaped spirals and projecting horizontally from the head. It is only our knowledge of their present-day descendants that enables us to infer the latter point with certainty from the extant pictorial representations ; only the modern breed makes it possible to interpret the animals of early Sumerian art. The faces and ears are variously depicted ; either the ears are short and pricked, and the face long, showing in profile a sunken brow and convex nose (the typical formation of a wild sheep's head), or we find elongated drooping ears and a convex profile (*Ramskopf*). We have not long known that the breed still exists in Mesopotamia ; so at present we have no sure knowledge whether these two types were kept racially separated, or whether both existed promiscuously, nor can we yet be certain that the second species represents the first influence of domestication. They seem to be confined here to the Jemdet-Nasr period—at any rate we have no evidence for them in later ages from Mesopotamia.

The domestic breed must have been widespread in prehistoric times. We know of it in Egypt as far back as the second prehistoric culture. Here it generally has pricked ears, but has a long tail reaching to the hocks, and the ewes are horned. Later, in the early centuries of the Old Kingdom, herds begin to appear with drooping ears, and individual ewes are hornless. But the shape of the head still remains that of the wild sheep, with the long fine face and undulating profile. This was the only breed in the Old and Middle Kingdoms, but from the beginning of the New Kingdom another breed appears, a heavy-horned fleecy species with normal horn-formation and long thin tail—the well-known Ram of Ammon (PLATE I). Under its influence the old hairy breed became extinct in Egypt about the time of the 18th dynasty. Yet even today, in other regions of middle and western North Africa, as for

example on the upper Niger, sheep are found closely resembling it, or showing only slight differences, the rams with the typical mane and long horizontally-directed horns. Naturally, time has brought considerable modifications, so that some are hornless, others have strong horns coiled like a snail's shell (*schneckenartig*), etc.

It is interesting that the old Egyptian maned long-legged sheep was one of the sacred animals ; in Mendes it was particularly sacred to the God Khnum, in Abusir-el-Meleg to Arsaphes. When it became extinct in Egypt it was replaced for cult purposes, remarkably enough, not by the newly-imported fleecy sheep but in both places by the goat. Those peculiar representations of typical maned long-legged sheep, with the horizontal sheep's horn and coiled horn of the Egyptian goat and a goat's beard, may originate from the transition period (PLATE II).

It is not always easy to distinguish between this group and another type found in North Africa, which also belongs to the hairy breed. These are small animals, with the throat quite covered with long hair like a lion's mane ; the upper part of the body is reddish-brown in colour, and the males have a white saddle-patch on both sides ; their facial markings are black. In view of their general resemblance, I am inclined to think that they derive from *ovis laristanica*. Quite typical specimens may be found in the Cameroons, where the colourings are often reversed, the parts of the underside and the extremities which are elsewhere white now being black. They contrast with the bony angular type of the preceding group called ' long-legged ', in that they show a more normal standard of plumpness and the tail reaches at most to the knee-joints. For this reason I describe them as ' maned short-tailed sheep '. Today they are widespread over mid-northern and western Africa, where they are found with a variety of colouring and with varying strength of horn and head ; like the Cameroon species, they suggest the wild breed, but have a more or less distinctively Roman profile (*geramst sind*). We know their present breeding-places and chief centres, but nothing of their history, either when they were domesticated or when and how they reached their present homes.

We have more information about the other group of hairy breeds, the long-legged sheep. Osteological investigation shows them to be descended from the *Vignei* group. In the Steppe-sheep of that group, as we have seen, there is a breed which descends far into the plains, and even in a wild state they form largish herds. Radde and others observed herds 100–200 strong. Their instinctive gregariousness makes it naturally easy to form them into enormous herds ; today, in central Asia,

PLATE I

GRANITE RAM PROTECTING A FIGURE OF THE SUDAN KING TAHARKA (TIRHAKAH), ABOUT 680 B.C. FROM EXCAVATIONS AT KAWA, SUDAN
Ph. Harvard Museum

facing p. 200

PLATE II

ANCIENT EGYPTIAN REPRESENTATION OF A FOUR-HORNED RAM
Ph. Cairo Museum

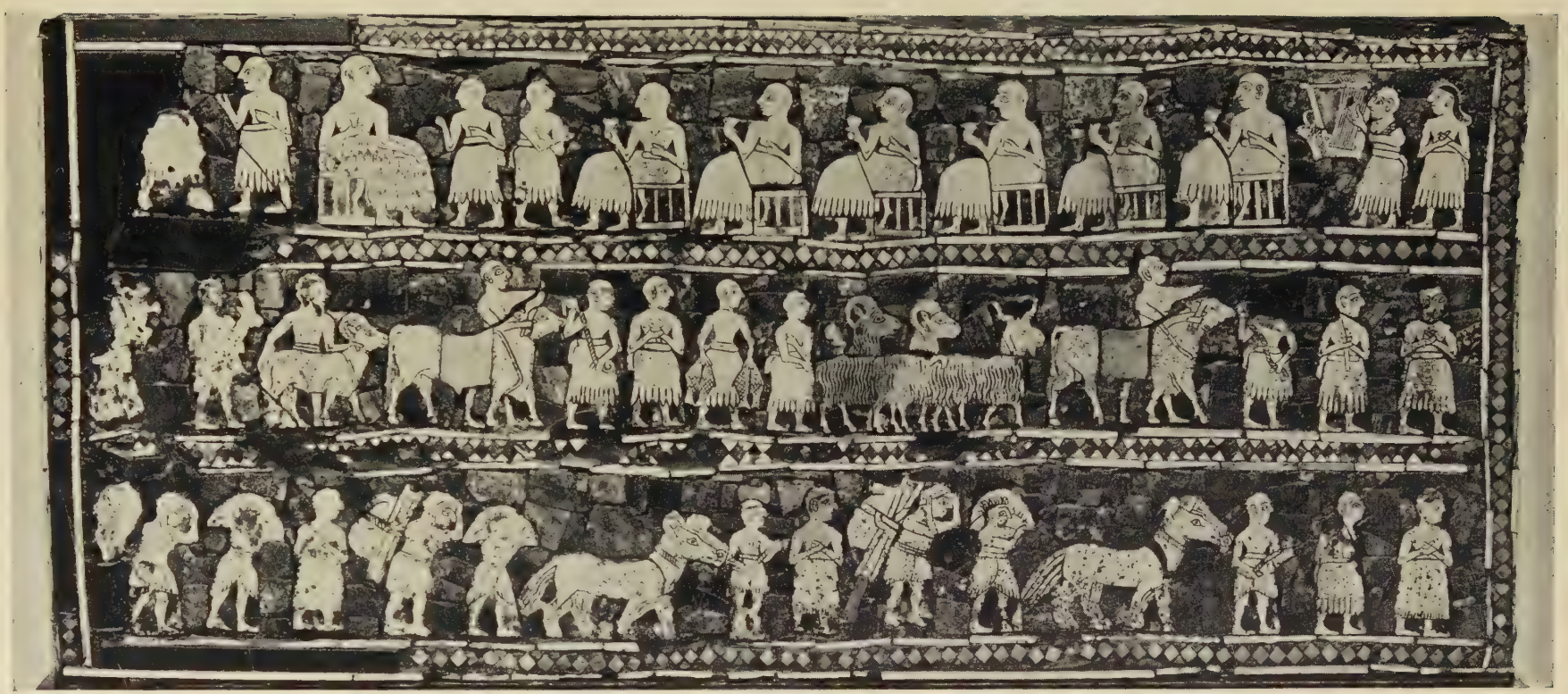

PLATE III

BROAD-TAILED SHEEP, MOSAIC, UR (middle row, third from left)
Ph. British Museum

PLATE IV

EUROPEAN MOUFLON, BERLIN ZOOLOGICAL GARDENS

PLATE V

CLAY MODEL OF RAM FROM JORDANSMÜHL, SILESIA
Ph. Breslau Museum

PLATE VI

ANATOLIAN SHEEP FROM A CAST OF A COIN IN THE BRITISH MUSEUM (by permission)
Ph. Max Mills

ANATOLIAN SHEEP IN PANATHENAIC PROCESSION, PARTHENON FRIEZE, FROM A CAST IN THE BRITISH MUSEUM
Ph. British Museum

PLATE VII

BRONZE RAM FROM SYRACUSE
Ph. Palermo Museum

a man may own a flock of 15,000 to 20,000 head and more, and a yearling lamb was used as a unit of barter up till quite recently. If we remember that all wild sheep make annual migrations, the process of domestication becomes intelligible. As with the reindeer, so it was with the wild sheep : in their wanderings they would be expected at certain definite spots, where men could easily capture them ; or, like beasts of prey, men would follow close behind the wandering herds and so keep away enemies in the animal world who competed with them for subsistence. Both partners derive advantage from this protection, and so a sort of trustful relationship quickly and instinctively arises between beast and man. The sheep gradually become tamed, not individually but as a complete herd, entirely on practical grounds. The assumption that they were first held to be sacred, or were used for sacrificial purposes, and so in this indirect manner became domesticated, seems to me untenable. For, on my supposition, the difficult question of how they were fed does not arise, as the animals roamed about as freely as when they were wild. In large tracts of Asia domestic sheep live in exactly the same way today. As in their wild state, so now they make annual migrations ; the owners follow behind, and the sheep take them from summer grazing to winter pasturage and back again. They never become ' domesticated ' in the proper sense of the term, for they are never housed under a roof—in fact they are exactly like the tame reindeer. Following on the protection which man afforded them against animal foes, breeds became possible which otherwise could never have been evolved, such as the fleecy sheep, the fat-rumped and broad-tailed breeds ; while these characteristics were preserved by man when they once appeared, because they were of use to him.

Let us now return to the Jemdet-Nasr culture of Mesopotamia. We shall find there another breed besides the one already mentioned, a fleecy sheep with strong, coiled horns, very like the modern animal. Its drooping ears and markedly convex profile already point to considerable domestication. Soon a third breed makes its appearance, but not until the beginning of historic times ; its earliest representative may be seen on the famous mosaic standard of Ur (PLATE III). Here we see, in the centre row, different sheep depicted, first the short-tailed fleecy sheep just mentioned, together with a goat, apparently being driven by a man. It has still the primitive head of the wild sheep, without a Roman profile, the ears are pricked and the horns have a snail-like spiral, making at the most a three-quarter turn. Next, looking backwards along the same row, we see a sheep led by a man, very like the previous animal in

the shape of its horns, head and ears, as well as in size and proportion of body. But it has no fleece, and a distinctly half-length broad tail, reaching to the knee-joint. I was in doubt for some time as to whether this was really a representation of a broad tail, or whether the mark which separates it from the rest of the body was only a break in the mosaic. But that is not the case. Mr Crawford, who kindly examined the mosaic for me in London this year, writes: 'the dark mark separating the tail from the anus is a groove or scratch deliberately made by the artist for this purpose. That is quite certain'. Whether the lack of wool is to be explained by the fact that the sheep had been sheared or plucked (as was generally the practice before shearing came into use), or whether the breed had not developed a fleece at that time, cannot be decided from this picture, which is the only one extant from that period. In any case it developed wool later. At least these sheep appear with fleeces in the later Assyrian period, as for example on the relief of Tiglath-Pileser III, where the ewes are hornless. But at the same period the short-tailed breed was also still in existence; I think I can recognize it on the frieze of Sennacherib's camp.

It is not until the middle of the first millennium B.C. that we find evidence of broad-tailed sheep with long tails reaching to the ground (in the modern breed crooked outwards again at the point). Herodotus (5th cent. B.C.) writes (III, 113): 'In Arabia there are marvellous sheep. One kind has tails three ells long, so that men attach them to a little trolley, to prevent them from trailing along the ground and so contracting sores. The other sort have tails as much as an ell broad'. The second of these breeds is possibly the first historical mention of the fat-rumped sheep. And the story of Herodotus, and later of Diodorus, about the means used to protect the long tail, is not just a fable, but, as modern travellers state, the method is still employed for exactly the same purpose in parts of Asia Minor.

It seems that the hairy sheep never reached Europe, while the broad-tailed and fat-rumped varieties are but seldom found there, and only in the extreme east, where they are probably a later importation. Such are the broad-tails of the Balkans which were probably introduced by the Turks, or the fat-rumped sheep of the Volga Kalmucks, which accompanied their masters from central Asia in their migrations of the 17th century. Apart from this, the sheep of Europe have always been the fleeced variety. They are already in evidence by the beginning of the Neolithic age, that is, the period when we find the earliest traces of agriculture and cattle-breeding. They occur simultaneously in the

two places where remains of domestic animals of that period are especially found, the Swiss lake-dwellings and the Danish kitchen-middens. In both we find a small sheep with erect horns, lenticular, and two-edged in cross-section, the so-called ' goat-horned ' or turbary sheep (*ovis aries palustris Rütimeyer*). Conclusive evidence is not yet available as to the provenance of this breed. Keller, who did much work on the subject, laid special stress on the resemblance of the turbary to the Bündner or Nalpser sheep found in the Swiss Alps (canton Grisons), especially in skull and horn formation. Since, besides this, these breeds have a relatively long tail reaching to the hocks, Keller postulated such a feature for the turbary too. The hypothesis that it was derived from the African maned sheep as a wild ancestor is untenable, for the reasons given at the beginning of this paper. Keller also believed that he could see a counterpart of the turbary sheep in certain Greek representations dating from the Mycenaean period, which show a tail of like length and horns curving behind the head in a peculiar manner. But Lydekker points out that this horn-formation exactly corresponds with that of the Cypriote Mouflon, which in addition shows the same cross-section. So, on the hypothesis that the Mycenaean representations are those of domestic sheep, he regards the Cypriote Mouflon as their ancestor. Duerst also investigated the question; basing his theory on the finds at Anau, he would derive the turbary from *ovis arkal*. But the evidence of period on which he relies has now been shown to be false. I myself have drawn attention to the fact that the cross-section of the horn is that of ewes of all kinds and breeds, or of young rams, and that therefore the horn-formation can be explained as the result of arrested development following domestication and stunted growth. It is certainly strange that the investigators of the turbary sheep, with osteological material before them, never remarked upon this; for a distinction between the horns of the sexes is elsewhere never lacking. I had then already expressed the suspicion that possibly till now the examination of the turbary had been confined to specimens of ewes or young rams. This has since been confirmed by Reitsma, who, besides examining the remains from the Terpen of the Netherlands, has also investigated the turbary sheep of the Swiss lake-dwellings. From the latter source a second variety of strong-horned breed had been described by Duerst (*ovis aries Studeri*), who assumed that its first appearance in Switzerland was in the Copper Age. But Reitsma showed that the remains of the turbary and of the supposed ' Copper-age ' sheep appear contemporaneously together and that the latter is the ram, the

former the ewe of the same species. Its modern descendants, little modified, can be seen in the Drente breed, the heath-sheep of the Netherlands, a long-tailed animal and, according to illustrations, with a fairly coarse, smooth wool. Similar primitive sheep are also found elsewhere in remote places away from trade-routes, as for example those of Sardinia, which show a tendency to possess more than one pair of horns. To the same group belong, or probably belonged originally, all European long-tailed breeds. Today they have been much refined by crossing with breeds of other ancestry, notably Merinos, an improvement which took place especially in the first half of the last century. It is from such cross-breeding, which certainly dates back much further, that are derived the various types of milch-ewe found on the coast from Schleswig-Holstein round to the Pyrenees. Of these, I may mention here the Frisian ewe, one of the largest of domestic sheep, standing nearly 36 inches at the shoulder and weighing as much as 220 lbs. They yield up to 500 kilograms of milk a year. Both rams and ewes are hornless.

It is from the ancient turbary sheep that are probably also descended those small, quite primitive, short-tailed beasts found in the Faroe Islands, Orkneys and Shetlands, and again in Iceland, Scandinavia, and on the heaths of north and northwest Germany, where the *Heidschnucke* of Lüneburg is well-known. An especially primitive representative of this species was, until recently, found on the island of Soay, in the St. Kilda group. They are small animals, only some 24 inches shoulder-high, with never more than one pair of horns, although other breeds in this group show a tendency to have several pairs. The horn-formation in the rams is that of the wild Mouflon, and corresponds also with that of the so-called Copper-age sheep. A high percentage of the ewes (one-third) are horned. Further, their horns are often fairly long and powerful, and agree both in form and position with those of the Copper-age sheep. The colour of the upper parts is a dull blackish brown, the underparts are light. A small light patch or *speculum* decorates the rear part of the hindquarters ; on the back itself this patch is divided into two parts by a stripe connecting the rest of the back with the tail, also blackish-brown. A mane of long black hair grows on the underside of the throat and along the neck. The breed may possibly be derived from *ovis Vignei*, seeing that it lacks the saddle-patch ; but the form of the divided *speculum* and the shape of the horns rather suggest relationship with the Mouflon group. The lack of a saddle-patch need be no argument against this, for such a

patch is not an invariable characteristic of the group : in the summer coat it is often practically invisible, if not completely so. It is also absent in the young animals, sometimes even in the old too, besides being occasionally lacking in the winter coat; this is shown by a ram of the European Mouflon breed now in the Berlin Zoological Gardens (PLATE IV). So if we look for the ancestry of the European short-tail in the Mouflon group, it need not necessarily be the European Mouflon itself. Apart from the reasons already mentioned, a point against it is the length of mane in the Soay breed : the European Mouflon has the mane so short that many investigators have entirely overlooked it. In the Soay breed it consists really of rather longer hair, but many of the Asiatic types possess fine manes. Therefore it is from the Asiatic variety that we must derive this breed, without at present being quite definite as to the manner of descent. The wool of the Soay sheep is short, about 1–1½ inches in length ; they moult like other animals, another primitive characteristic. ' If not shorn in the spring, the fleece is gradually shed during the summer in large blanket-like masses '. Then the sheep are rounded up and what can be plucked is removed by hand. They are never shorn in the proper sense of the term. This breed shows close affinity with the clay figure of a ram recently found at Jordansmühl in Silesia, and this is probably the best, if not the only, pictorial representation of the turbary (PLATE V).

Apparently our modern fleeced sheep (a later development) also go back to these Asiatic herds. Perhaps the legend of the Golden Fleece may show that the origin of the fine-fleeced sheep was quite well known in antiquity. For a long time this breed attained a specially high standard in Asia Minor (PLATE VI) ; Sardis and Miletus in particular were famous wool-producing centres, with other places hardly less well known. The wool-trade of Miletus was widespread, with markets in Ionia, Attica (PLATE VII), Magna Graecia, Sicily (PLATE VIII), and Rome. No wonder then that people became anxious to make wool a home product and to be independent of foreign trade. It is expressly stated of Polycrates of Samos, who was desirous of raising the standard of cattle-breeding in his own land by importing the best breeds from abroad, that he brought fine-fleeced sheep from Miletus to Samos. The Phoenicians seem to have done much to cause the spread of the breed, especially in North Africa after the foundation of Carthage. Where they came, they brought their sheep with them, so that very soon we find the fine-fleeced species introduced into Spain. But it was probably the Romans who laid the foundations of the famous Spanish breed of sheep.

Columella (VII, 2) tells how his uncle sought to improve his sheep by importing breeds from Africa. Probably the Romans did a great deal of such importation, with the result that sheep-breeding reached a specially high standard in Spain, since the climate must have been very congenial. So we learn from Strabo that the finest wool came from Spain, and that Spanish rams fetched a very high price. Further importations may have taken place under Moorish rule. Peter IV of Aragon used Moorish and Berber sheep to improve his stock. In this way Spanish sheep-breeders reached the pinnacle of their fame in the 18th century, with their so-called Merinos, the only fine-fleeced sheep with curled wool. With their help the French state sheep-breeding industry was founded at Rambouillet in 1777. The first Merinos came to Germany in 1765, through the Elector Frederick Augustus of Saxony, and the breed so established was called 'electoral' in his honour. The Empress Maria Teresa first brought 300 Merinos to Austria in 1775, and a later batch was imported from the Spanish herds of Infantado, Guadelupe, and Negretti ; this caused the name of Negretti to be given to these Austrian Merinos, which were remarkable for their wrinkled skin and long wool. So practically all the good wool-producing breeds on the continent today have descended more or less from Merino strains, while the mutton-producing types are based more on English breeds. It is true that Merinos have more than once been imported to England, but the climate did not seem to suit them and they were never able to develop far.

To sum up, we find three lines of ancestry for the domestic sheep, all to be looked for in Asia :—(1) the Asiatic Mouflon, (2) the *Vignei* type, (3) the Argali. The third of these is of no importance for European breeds.

Notes and News

THE ROCK SHELTER AT CAP BLANC (PLATES I–IV)

The rock-shelter of Cap Blanc, famous for its remarkable sculptured frieze, has not received in this country the attention it deserves. This is, perhaps, largely due to the fact that there exists no adequate description of the site in English, while the French records are not easy of access to the average student. This shallow, limestone rock-shelter was first discovered by Dr Gaston Lalanne in 1909 and lies on the right bank of the Beune, a tributary of the Vézère, seven kilometres from the village of Les Eyzies in the Dordogne. The site consists of a large terrace in front of the shelter containing the sculptures high up on the steep hillside overlooking the river ; the shelter itself, which measures 15 by 4 metres, and a semi-circular inner chamber, measuring about 5 by 4 metres. This chamber and a small area in front of the carvings was carefully paved with slabs of stone.

The age and authenticity of the rock-sculptures, the existence of which was not suspected at the beginning of the excavations, are indisputable, since they were almost entirely covered by undisturbed Magdalenian talus deposit, a certain amount of which still remains unexcavated. This deposit consisted of a shallow upper layer containing only some bones of reindeer and a few worked flints. This was followed by a sterile layer, below which the filling proved rich in finds of Early Magdalenian date including representative artifacts in bone and flint. Besides these were discovered a series of stone tools, much larger in size, coarser in type, and unusual in shape.* These were recognized as being eminently suitable for the execution of carvings, and indeed bore a striking resemblance to the equipment of a modern sculptor. An oblong palette of stone, measuring 27 by 15 cm., was also found, with red ochre paint mixed upon it. Various small carved articles occurred, including sketches on fragments of bone, among them a horse's head, the head of a reindeer, and several indecipherable marks and chevrons. Two carved ' batons de commandement ' were found, but even more interesting than these were a human

* ' Parmi ces séries, il existait à côté des silex magdaléniens classiques (grattoirs sur bout de lames fines, burins abondants, perçoirs, etc.) toute une série de pièces en général beaucoup plus volumineuses et plus grossières, les unes prismatiques et taillées à grands coups, d'autres constituant de très gros burins, et enfin d'autres, plates, avec une sorte d'épais tranchant et formant comme de puissants racloirs'. Capitan et Peyrony, *Revue anthropologique*, 1912, XXII, 441.

foot with four toes and a small ivory beetle pierced for suspension. In the lower strata were found large fragments of limestone which had become detached from the rock in Early Magdalenian times, and upon one of these was carved a bison, 50 cm. in length. It would appear that most of the finds from the site are at Bordeaux in the private possession of Madame Lalanne, the widow of the excavator.

The sculptures still visible on the wall of the shelter consist of a frieze of horses and six other carvings. The latter represent the head of a possible reindeer, almost entirely covered by natural accretion, the heads of two other indeterminate animals, the head of a horse, and two small bisons both of which have been partly destroyed. These carvings are in low relief, are small in size, and may all well be of a later date than the main frieze. This is sculptured in high relief and, in the writer's opinion, may challenge comparison with the finest art of classical antiquity. It consists of six horses, of life-size, divided into two groups of three. It will simplify description to take the animals from left to right, numbering them accordingly.

Horse no. 1 (PLATE I) which faces towards the right, is shown standing quietly with its head down, and, worn and damaged as it is, astonishes by its living quality. The mouth and nostrils are still particularly perfect in detail, but part of the back, through prolonged exposure, is covered by an extremely hard deposit, while the end of the tail and the lower part of the legs have been destroyed. The relief in the centre of the body is about 30 cm. and that of the head about 10 cm. Horse no. 2 (PLATE II), also facing towards the right, is smaller than the foregoing, giving the impression of being represented in perspective as if further from the observer. Moreover part of the hindquarters are hidden by the head of horse no. 1 in the foreground. The head, the lower part of the body and the hind legs, have been destroyed, as well as the forelegs below the knee, although these can still be faintly traced as far as the hooves. Horse no. 3 (PLATE III), measures 2.15 metres in length ; it faces in the opposite direction from the previous two. The whole of the lower part of the animal came below the zone of calcareous rock upon which the frieze was principally carved, and is no longer distinguishable. In the case of the end of the muzzle the outline may still be traced although the surface form has been destroyed. What remains of the animal is exquisitely modelled in smooth curves. The mane, as in every case, is left vague, but the short upstanding hairs are suggested by finely engraved lines. On the other hand the forelock is clearly modelled in relief. There are

incisions on the head which suggest a halter ; indeed one running down the side of the face is difficult to account for otherwise, although another above the jaw might be explained as a fold or wrinkle where the head joins the neck. Both the swell of the jaw and the muscles of the neck are very simply and beautifully rounded. Traces of ochre were found on the head and neck when first uncovered.

The second group may be seen a short distance to the right of the first, and is of hardly less interest. Horse no. 4 faces towards the right. It is apparently unfinished. The neck, chest, and upper foreleg are in very high relief, the line of the back and rump clearly but not deeply carved, while the head, with the exception of the ear and upper part of the forehead, is only slightly outlined. Horse no. 5, again facing to the right, is represented as standing slightly behind no. 4. The head was probably unfinished, but the whole carving has suffered extensive damage. Horse no. 6, which presents an interesting example of carving in perspective, faces the left and is turned away from the spectator, so that only the hind quarters are seen. It also is apparently unfinished and is in medium relief. Traces of paint, consisting of red and yellow ochre, and apparently black manganese, still remained on this second group of carvings when first excavated.

Some time after the excavations at the site had been completed, workmen engaged on erecting a shelter to protect the monument discovered a crouched burial. This, on being reported to the authorities, was duly excavated. It consisted of a skeleton, almost complete, lying in the lowest level, and at a distance of 2.3 metres from the paved area in the shelter. No grave goods were found, but stones lay under the skeleton, as well as at its head and feet. A glass case, which may be seen in PLATE IV, contains a cast of the skeleton lying in the position in which it was originally found.

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GERGOVIA

The site identified since the 16th century as the Arvernian oppidum of Gergovia, successfully defended by Vercingetorix against Caesar in 52 B.C., lies a few miles to the south of Clermont–Ferrand and is an oblong basalt plateau running east and west, 1½ kilometres in length by over 500 metres in breadth, reaching 744 metres above sea level, and rising over 300 metres above the surrounding plain.[1] Excavations on a modest scale have been conducted here for the past two years[2] by the *Comité Pro Gergovia*, formed under the auspices of the Académie de Clermont in 1934, mainly owing to the energy of M. Emile Desforges, who had been collecting surface finds on the plateau for some years and who had already made tentative soundings in 1932 and 1933. An additional impulse towards the formation of the committee was supplied by the local interest aroused through the controversy over the rival site to the north of Clermont-Ferrand;[3] but our site was regarded as of sufficient promise in itself, whatever its history, to render its investigation worth while.

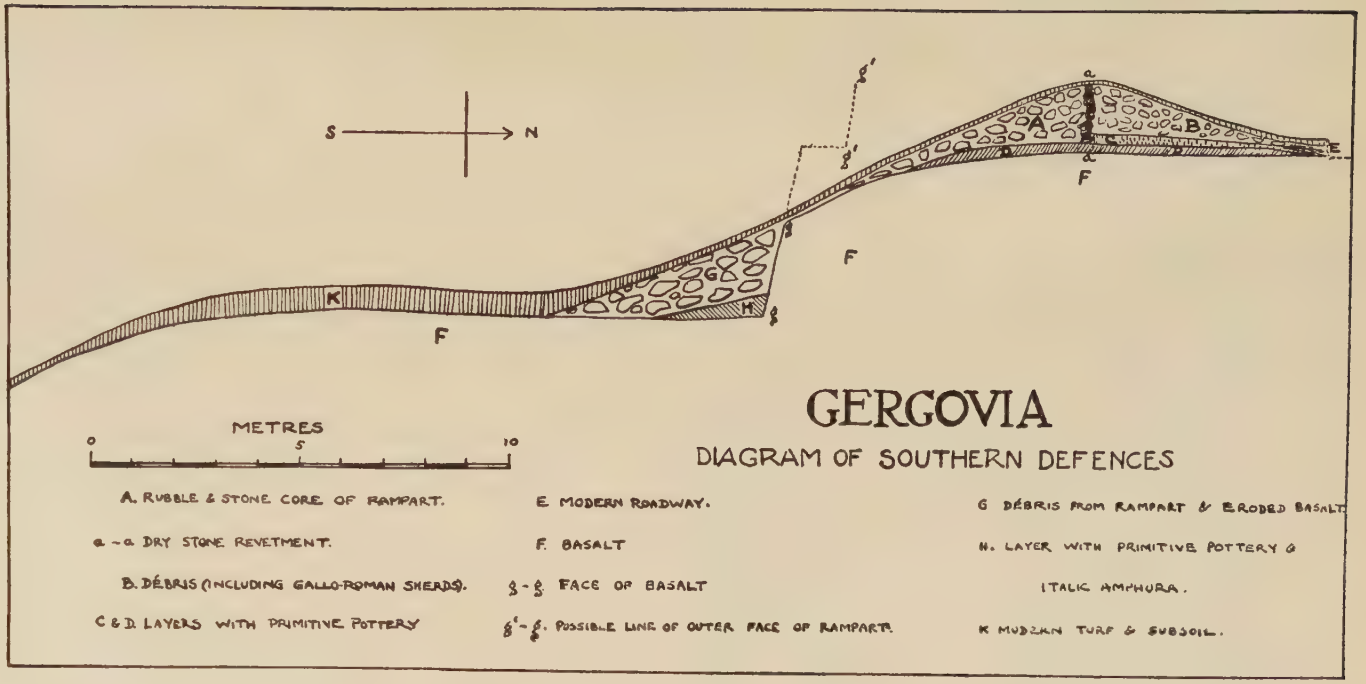
Fortifications

The obvious starting-point was the great grass-covered stony bank, still in places two metres high, which runs for several hundred metres along the southern edge of the plateau and which, though much lower, is still visible along part of the west side. In the centre of the southern mound there has been found and followed for over 100 metres a dry wall of small, roughly-cut blocks of basalt, which appears to be the inner face of a rampart of stone and rubble (figs. 1, 2). The outer part of this rampart, and with it the face and any berm there may have been, has slipped down the hillside; but immediately below it the basalt of the plateau, which in any case tends to form cliff-like faces, was cut away to leave a perpendicular drop, still over 2 metres in depth, to the small terrace beneath. This cutting was laid bare for 3 or 4 metres at two places about 175 metres apart. The system as so far elucidated is illustrated in the diagrammatic section (fig. 1). A wall has also been recovered at three points at the western end of the plateau and it is hoped to continue work there in 1936. Nothing resembling a *murus gallicus* has been observed.

[1] Antiquity, 1933, vii, 216-9.

[2] *Révue Archéologique*, 1935, 220–230, has a brief account of the work done in 1934 (on p. 229, line 7, *for* avant *read* après).

[3] Antiquity, *loc. cit.*, and 1934, viii, 117.


S
N
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METRES
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GERGOVIA
DIAGRAM OF SOUTHERN DEFENCES
A. RUBBLE & STONE CORE OF RAMPART.
a - a DRY STONE REVETMENT.
B. DÉBRIS (INCLUDING GALLO-ROMAN SHERDS).
C & D. LAYERS WITH PRIMITIVE POTTERY
E. MODERN ROADWAY.
F. BASALT
β - β FACE OF BASALT
β' - β'. POSSIBLE LINE OF OUTER FACE OF RAMPART.
G DÉBRIS FROM RAMPART & ERODED BASALT
H. LAYER WITH PRIMITIVE POTTERY & ITALIC AMPHORA.
K MODERN TURF & SUBSOIL.

FIG. 1

A curious feature of the southern rampart is the existence, at distances varying from 5–12 metres, of stone structures averaging 1.60 metres in width and sometimes reaching over 5 metres in length, abutting on the inner revetment wall (FIGS. 2 and 3). They may conceivably have served the double purpose of buttresses to the badly-built rampart and of ramps of access. Ten (or possibly 11) have so

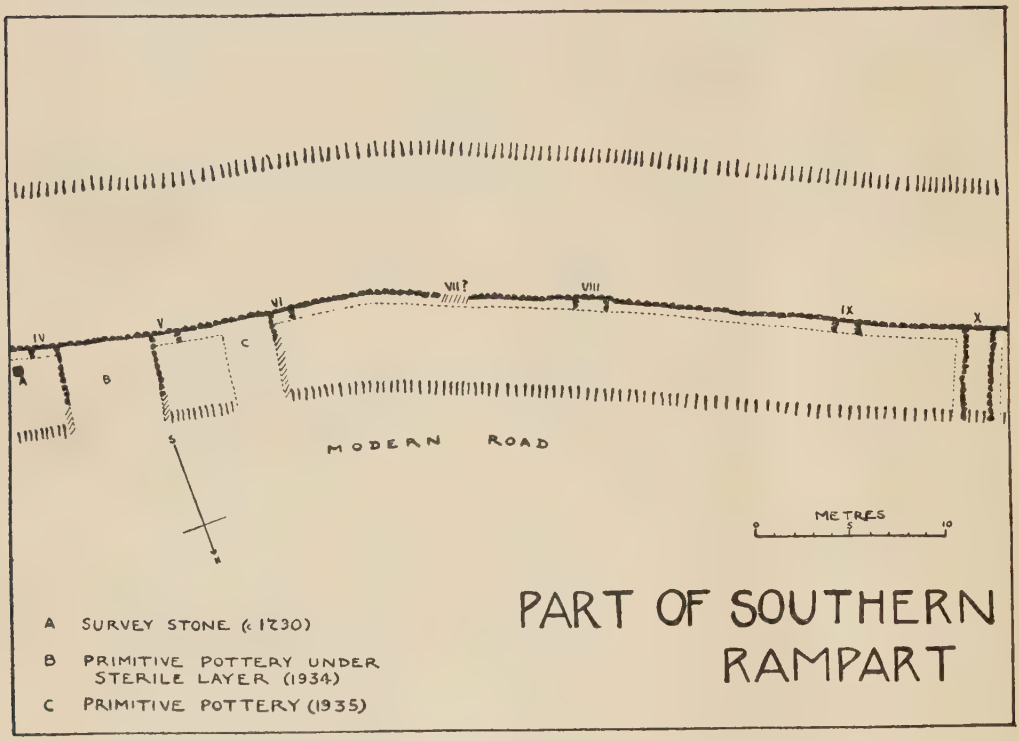


FIG. 2

far been found. Neither they nor the rampart show uniform construction. The revetment is sometimes well built of carefully prepared stones, resting on the basalt; at other points the rampart seems to have been just thrown up on the soil of the day and the revetment and ramps may rest on this or on rubble. The area between ramps IV and V was carefully cleared by Mr Christopher Hawkes in 1934, but no post-holes nor any signs of constructions between them were observed.

He found, however, a good deal of primitive pottery, similar to sherds beneath the rampart in the preliminary trench cut in 1933 ; it was separated from the surface pottery of Gallo-Roman date by a sterile layer, and occurred at other points near and below the rampart. It is reminiscent of Hallstatt or even Bronze Age forms but might be as late as Early La Tène in *date*. It has clearly no Roman connexions. Under the rampart were also a few tanged and barbed flint arrow-heads and a bronze arrow-head. At the foot of the scarp more pottery was found, sealed under the débris which had fallen from the rampart and

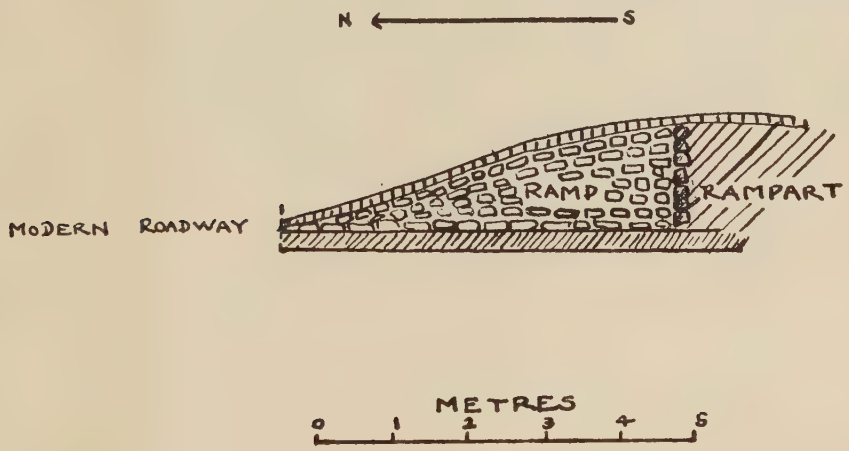


FIG. 3

the eroded basalt edge above. This pottery was also primitive, but more definitely La Tène in character. With it were fragments of a painted italic amphora of the period of the Roman conquest, and about 350 sling-stones. These stones were also found in quantity elsewhere along the rampart ; they are rounded pebbles from the streams in the valley below. In excavating between the ramps occasional Roman tiles and pieces of Roman pottery were found, and at one point lumps of mortar and other building débris occurred, which suggests that the space between the ramps remained open for some time and that when the land near by was cleared the rubbish from ruined buildings tended to be thrown up against the old rampart.

Excavation within the Oppidum

The great difficulty presented by the site is the stone heaps, some over 2 metres in height, scattered about the fields, the products of the *épierrage* practised for many centuries by the industrious Auvergnat cultivators.[4] Aucler[5] in 1862 conducted excavations at various points in the centre of the plateau, and in one case opened parts of a large building recalling the houses of the Parc-aux-Chevaux at Mont Beuvray. A corner of this building was uncovered in 1934 and found to correspond to his measurements. Certain additional features were noted, including a tile-drain leading through the house, perhaps from an interior court, to a rubbish pit outside. The building is clearly Gallo-Roman, and in certain respects (such as its good ashlar walls, carefully laid and mortared) more advanced than the Mont Beuvray buildings. There was an abundance of Roman tiles, painted plaster, etc., and, in one room, the remains of a mosaic floor of white tesserae with occasional black ones. Signs of structural alteration were apparent (the drain in particular appears to be secondary).

About 100 metres further north other buildings were brought to light in 1934 and 1935. The west side of one (FIG. 4) was fronted by a portico 54 metres long of rough flagstones resting on undisturbed earth, with, at intervals of 4 metres, columns of segmental bricks, some of which rested on limestone bases. The portico seems to have been roofed with tiles, of which large quantities were found. In the centre the portico broadens out into an entrance from which a flagged passage or path leads eastwards. The whole structure is an enclosure formed of a narrow range of buildings, of which the north side, the northeast corner, the east side and the west side have been in part recovered. The soil is very shallow on the south side, and no walls have been found, though there are abundant remains of building refuse. The enclosure recalls the Mont Beuvray market-place. Within it a small square Romano-Celtic temple of the usual type has been partially unearthed. Between the west side of the enclosure and the temple the ground is covered with flagstones, under which, at one point, a small pit containing pottery like that from Aucler's villa was found. A particularly formidable stone heap still covers most of the temple site and from it have been picked fragments of carved limestone, including

[4] ANTIQUITY, 1934, VIII, 117.

[5] P.-F. Fournier, 'Les Fouilles de Gergovie depuis le XVIIIme siècle'. *Rév. d'Auvergne*, 1935, 153–169.

the volutes of a capital. It was, however, possible to find the four corners of the outer temple wall, and then part of the inner (cella) wall.

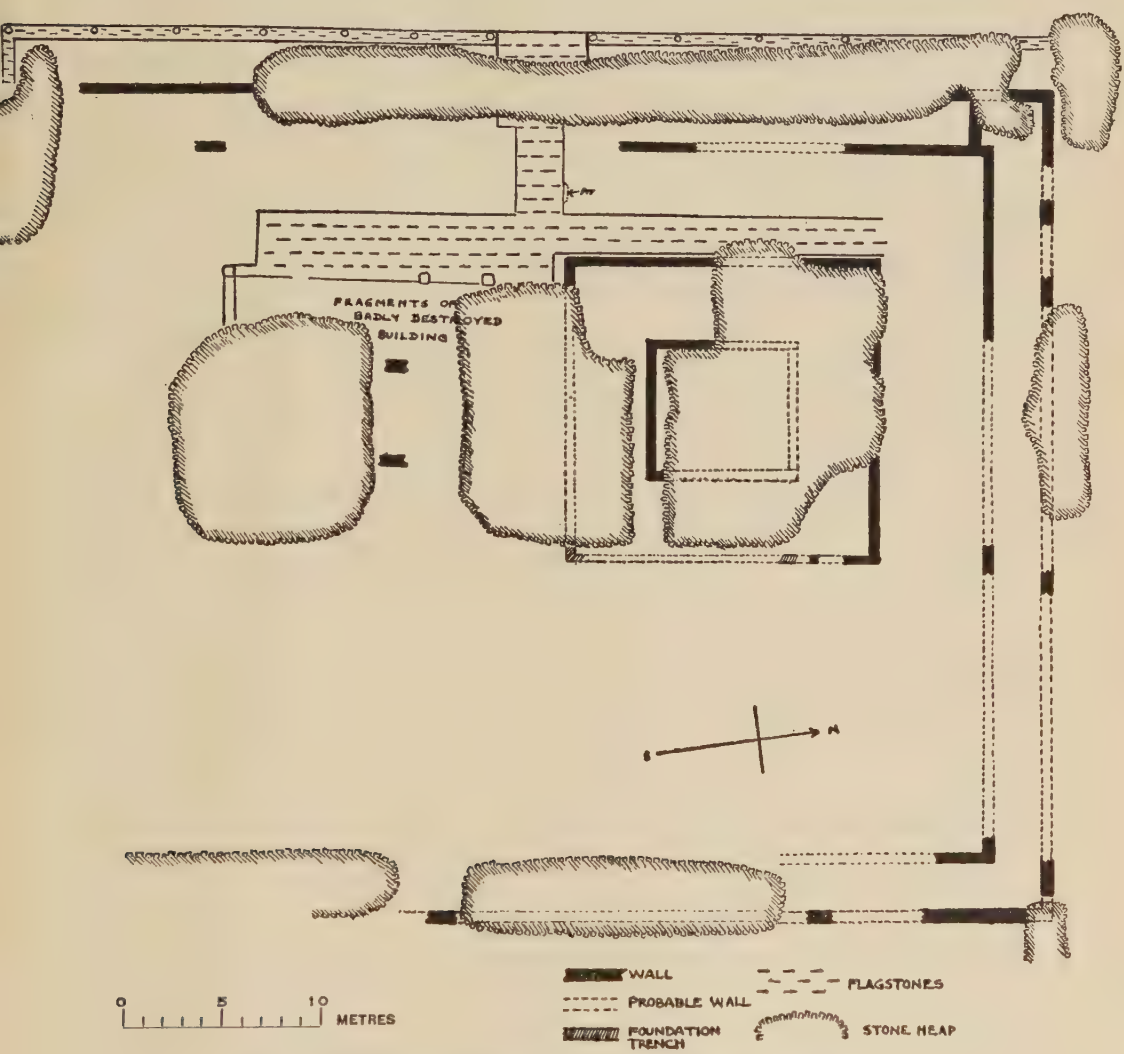


FIG. 4 GERGOVIA: GALLO-ROMAN TEMPLE AND ENCLOSURE

The southwest angle of the latter was found, and then a way cleared through the stone heap to the southeast angle. Both compartments

of the temple had a floor of a kind of *opus signinum*—smashed-up potsherds embedded in cement—and the southeast angle of the cella, where the wall was completely broken, was established by means of the gap between the two pavements. The interior of the cella, except for a half-foot or so, is still covered with tons of stones which it is hoped in time to remove.

The pottery of the buildings just described has many features in common with the later pottery found at Mont Beuvray, which is hardly earlier than the last quarter of the last century B.C. It is predominantly Gallo-Roman in type, and some stamped Augustan Arretine occurs. In and near the temple enclosure Rutenian and Lezoux stamps were found, and decorated Lezoux ware of the second century, but none of these later fabrics have so far been unearthed in Aucler's villa or its rich rubbish pit. A few Gaulish coins (Arvernian types) have been found on both sites ; in the temple enclosure were found two coins of Trajan. The occupation of the temple area thus pretty clearly lasted into the second century A.D., but Aucler's villa, so far as is known, may have been abandoned early in the first century, near the time when Clermont (Augustonemetum) is believed, on the analogy of Autun, to have been founded. It would not be surprising to find that a sacred site lasted on after the rest of the town had been shifted.

The pre-Roman habitations still proving elusive, a search was begun on the southern side of the centre of the plateau, where there is a dip in the ground and where primitive man would be a little better sheltered. The most ancient known track across the plateau comes up from the valley at this point, and it was here that Aucler believed that he had found a gateway through the rampart. Near the track there is a well of stagnant and undrinkable water. A couple of hundred metres down the slope there is a trough fed with water from a spring which cannot be far below the gateway, and which must have been one of the chief sources of supply for the original inhabitants.

Pits were dug at three points in the hollow and large quantities of pottery were found, suggesting a fairly intensive occupation of the neighbourhood, though as yet no actual huts can be vouched for. Most of this pottery would appear to be Gallo-Roman in character, though it has not yet been fully examined. Five Gallic coins were found, and also fibulae of La Tène III type. There were also a number of fragments of iron slag and a few small pieces of bronze slag, suggesting that metal working went on in this quarter.

It is not yet possible to make definite statements as to the history of the plateau, though it is obvious that it was occupied with surprising intensity in the period immediately after the Roman conquest. The Roman sites so far attempted are but a sample of what must have been the total, judging by the quantity of Roman tiles found in nearly every part of this large area, and judging by the number of points where local peasants state that in digging they have come across masonry. These sites are not without value because of the light they may be expected to throw on a much-neglected period of Gaulish history, the hiatus between the conquest of Caesar and the reorganization of Augustus. It may also be hazarded that if this site had had no importance before the conquest it would be hard to understand why it should suddenly have become so thickly inhabited.

As regards the rampart, there appears to be enough evidence to set it before the Roman conquest. So far no Roman pottery has been found beneath it and its rough workmanship bears no trace of Roman technique. The pottery beneath and around it is entirely different from that of the Gallo-Roman sites. Various datings have been proposed for these sherds, but the general tendency is towards the view that pottery of this sort lasted on in this mountainous region with very little change through at least the later Bronze and the Iron Ages to the eve of the Roman conquest.

OLWEN BROGAN.
N. LUCAS-SHADWELL.

CINEMA-PHOTOGRAPHY AND PREHISTORY[1]

So far as I am aware, no notice has been taken by the moving-picture industry of L. Zotz's[2] praiseworthy efforts to bring German prehistory before the public on the films. It may perhaps be unfortunate that our science is thus deprived of a useful aid to publicity, but on the other hand it must be admitted that the execution of such films by the trade involves a risk of their becoming too ' filmy '. For the industry always attends more to producing a motion-picture effect than to the objective ends which we, as specialists in a profession, have in view. A film of the kind in question should not only consist of pretty pictures : it should rather, by virtue of its special character,

[1] ' Urgeschichte ', which of course comprehends also protohistoric and early historic time. There is unfortunately no corresponding word in English, though such is badly needed. (TRANSLATOR).

[2] *Nachrichtenblatt für Deutsche Vorzeit*, IX, 50–52.

reveal the true nature of our science. Only an expert, therefore, can be in a position to satisfy these demands.

With this in mind, in the spring of 1935 I began with private help to use a sub-standard film camera for taking films of a purely scientific character. I decided to use a Cine-Nizo, model D (16 mm.), with a Steinheil-Cassar lens (aperture f 2.9, focal length 25 mm.); besides the normal speed of 16, this camera has also speeds of 8, 24, 36 and 64, as well as an arrangement for trick-photography. It is absolutely necessary that the camera should be fitted with these variations of speed, as it must be able to take quick-motion photographs and, above all, slow-motion ones. The Cine-Nizo is equipped for reels of a length of 15 and 30 metres. Various projectors are possible ; a Kodak, model D, with a 300 watt lamp,[3] is quite adequate for a medium-sized lecture-room.

In 1935 I made three films, of interest both for specialized teaching and to the general public. The first was staged in a pottery-works, and shows, besides the wheel-system, the other methods employed in primitive times for the making of pots. If the potter is clever, a number of scenes can be staged without much expenditure of his time or any special supervision. A film of such a kind will be of use in supplementing the less graphic verbal narrative, on occasions when instruction is being given on primitive technique, and will also provide the general public with a valuable illustrative commentary on the history of a handicraft. The end of the film shows a reconstruction of a La Tène potter's kiln (dome-shaped), set up in his garden by one of my pupils. During the next few months I hope to construct motion-pictures illustrating other branches of technology: for instance, flint-work and bronze-casting.

The second film was made during my last excavations. First I showed the typical mining area on which I was engaged at the time ; this entailed much work in constructing the film. Then the actual excavation was recorded, in so far as the various devices were important to illustrate procedure. Such a picture, again, is useful both for teachers and for the general public.

In the third of these pictures, I staged part of the work of a museum demonstrator (*Präparator*), particularly the difficult task of reconstructing a pot whose shape is known only from an imperfect profile. For these laboratory photographs I used a Nitrophot lamp, Marke Matelux,[4] of 500 watts, giving a strong enough light to take large

[3] 400 watts in Germany. (TRANSLATOR).

[4] Any 500 watt lamp may be used, *e.g.*, the Kodalite.

pictures (*Grossaufnahmen*), with full aperture, at a distance of from one to two metres. This lamp can be used also for infra-red photography.

I could not afford to adapt the 16 mm. film for sound-recording (the necessary Siemens-Halske projector[5] costs about 3000 Austrian shillings), so that descriptive narrative had to be given before each scene. Besides the rest of the work connected with the film, I am in the habit of setting up the captions also, which are first drawn by an expert draughtsman in black Indian ink on white drawing-paper. For the photograph itself I use the Universal caption bench ('Utiba'), the invention of a Viennese photomechanician. With the aid of a projecting Proxar lens and by orienting the camera with a goniometer, it is not difficult to secure the captions in the film. For this purpose, cheap positive film may be used, which gives a clear white script when developed. A simple and easily legible style of lettering must be used. I generally employ for the scene-pictures the Agfa or Kodak reversible film; the former has the advantage of giving as good results for a slightly lower price.[6] When it is adapted as a Panchromatic film, it is not necessary to use a yellow screen in the open air.[7]

Films are also of importance for demonstrating purely scientific and specialist problems. To give an example, I have sometimes, during a lecture on the relationships of cultures in Europe in the Bronze Age, shown a film which makes cultural movements and influences clear at a glance. I am planning to make a film showing a reconstruction in my own particular field of research. In this way it might some day be possible to film scenes from the life of our ancestors; such films, which of course must be quite faultless, would be assured of success in educational circles.

On the technical side, it must be emphasized that an experienced photographer—and such should every prehistorian be, for photography is an essential qualification in our profession—will hardly find any difficulty in learning to use a film-camera. The exposure alone will present any problem; and that is already partly solved by the fact that the new 9.5 mm. Eumig camera is constructed with a selenium-cell which gives an automatic approximate estimate of the strength of the light.[8] Most of all one has to consider the correct composition of the scene and its

[5] In England a Gaumont-British Projector would be suitable, costing £80.

[6] In England both films are the same price.

[7] A Kodak expert told me that this may not always prove advisable. (TRANSLATOR).

[8] I am informed that the same result is obtainable by the use of any photo-electric cell meter, of which a number are on the market. (TRANSLATOR).

value as a film. That is important, because too much wastage soon becomes unpleasantly expensive. The operator's chief efforts are concerned with the length of the scene ; it must be neither too long nor too short, because otherwise either the attention will flag or it will not be possible to grasp the meaning of the picture. As an average, one should not waste more than 5 metres in a 30 metre film.

I hope that these short notes have shown the importance of the sub-standard film for our purposes ; and I shall be particularly glad to have my own experience supplemented from other sources. Opportunities for using the camera are plentiful, considering how active excavators now are in every country, especially of course in England, where, thanks to the enterprise of O. G. S. Crawford, great attention has long been directed to the pictorial illustration of every kind of monument. N. PITTIONI.

TWO AXES OF PRESELY STONE FROM IRELAND (PLATES V–VI)

In 1926 while making an examination of some hundreds of stone axes from different parts of Ireland which had previously formed part of the Knowles collection, I suggested that one of these (PLATE V) had been made of the dolerite from Presely, *i.e.*, the rock from which the so-called Blue Stones at Stonehenge were made, and this identification was subsequently confirmed by the late Dr H. H. Thomas. After the death of Mr Knowles, the remainder of his collection of Irish stone axes and adzes passed into my possession and among these I identified one further specimen (PLATE VI) of the same material. The provenance of the former specimen was clearly established, it having been found five feet deep in the peat of Carclinty Bog in county Antrim in association with other stone axes and many flint flakes. The latter specimen, however, is simply described as having been found in county Antrim.

Further specimens occurred in the same collection which suggested, but not so clearly, porphyritic diabase. Petrological identification of unfractured ground and polished implements is frequently unreliable, and pending thin sections being taken from these specimens I hesitate to make a definite claim in their regard.

In the hope of discovering further examples of implements made of this rock, I circularized various Irish museums, but unfortunately with a negative result. None the less, in view of the welcome increase in general interest in the petrological identification of the material from

which axes and adzes have been made, it is possible that further specimens may, in the near future, be identified.

In this regard it would not be out of place here to enumerate examples of implements of ' Preselite ' in England and Wales. England has produced a single example—the cutting end of a very small axe or chisel from Stockton Earthworks[1] (ten miles northwest of Salisbury) which is now in the Salisbury Museum. From Wales four examples have hitherto been recorded, all of perforated axe-hammers of Beaker type. The sites of discovery of these specimens were as follows :— Arthog, Merionethshire ;[2] Llanglydwen, Carmarthenshire ;[3] Trelech a'r Bettws, Carmarthenshire ;[4] Clap-yr-Arian, Llansantffraid Cwmdeuddwr, Radnorshire.[5] I am indebted to Mr Stuart Piggott for drawing my attention to certain of these references.

ALEXANDER KEILLER.

A POTSHERD FROM THE STONEHENGE DITCH (PLATE VII, A)

Among the relics from the Society of Antiquaries' excavations at Stonehenge in 1920–26 exhibited in the Salisbury and South Wilts Museum are two joined sherds of pottery numbered 1610/1611. They were found in ' Crater no. 2 ' of the ditch, 18 inches from the bottom and at the side. Crater no. 2 is that to the east of the causeway that breaks the ditch opposite Aubrey Hole 20, near the ' South Barrow ', and the depth indicated makes it certain that the sherds derive from the primary silt of the ditch, although in the report on this part of the excavations in *Ant. Journ.* VI, 4, no mention is made of their discovery. With no. 1610/11 are preserved four further sherds of identical ware with backing of shell and some chalk, but owing to the decay of their surfaces no features remain. 1610/11 however is ornamented in a distinctive manner which immediately suggests certain parallels. It has a rough chevron pattern executed in shallow groove technique, the grooves showing longitudinal striations. Such ornament is characteristic of a group of pottery recently recognized as belonging to the Early Bronze Age in Britain and including the wares from Woodhenge. The Stonehenge sherd can be paralleled from this site (*e.g.*, nos. 26, 42, 44, of Mrs Cunnington's *Woodhenge*) and may be compared

[1] *Antiq. Journ.*, VI, 16.
[2] *Arch. Camb.* 1930, 407.
[3] *Ibid.* 1930, 407 ; 1935, 270.
[4] *Ibid.* 1930, 407 ; 1935, 270.
[5] *Ibid.* 1935, 278.

even more closely, both as regards ornament and texture, with the similar sherds found in 1920 at Ratfyn, near Amesbury (*Wilts. Arch. Mag.* XLVII, 62) and now in the Salisbury Museum. A comparison made on the spot left no doubt of the identity of the Stonehenge sherd with those from Ratfyn.

The sherd is of considerable importance in deciding the date of the Stonehenge ditch, for it shows that the primary silting of the ditch was formed in the Early Bronze Age, and the evidence of the two groups of beaker fragments found on the top of this silt (*Ant. Journ.* VIII, 150, 151, 173) shows it to have been completed within this period.

The writer of this note is deeply indebted to Mr Frank Stevens, Controller of the Salisbury and South Wilts Museum, for his permission to publish the sherd, and for the photograph which illustrates it.

STUART PIGGOTT.

INTERNATIONAL PREHISTORIC CONGRESS AT OSLO.

The third and definitive circular giving prospectus and information concerning this Congress has now been issued. Copies may be obtained either direct from the Secretariat, International Congress of Prehistoric Sciences, c/o Universitetets Oldsaksamling, Oslo, Norway, or through Mr C. F. C. Hawkes of the British Museum, as secretary (jointly with Prof. V. G. Childe) for Great Britain.

The Congress meets in the first week (3rd–9th) of August. Under the presidency of Prof. A. W. Brøgger, and with Prof. J. L. Myres as one of the general secretaries, the organizing committee is getting together a programme of first-rate interest. Northern archaeology naturally takes a primary place, but contributions from almost all countries cover a wide field. From this country alone there are some thirty contributions on subjects ranging from the Stone Age in India and North Africa to Art in the Dark Ages. There will be several important papers on Near Eastern and Mediterranean archaeology, and megaliths and their relationships take a leading place among the subjects contributed from the British Isles. In fact, in the earlier as well as in the later phases of prehistory from the Late Bronze Age onwards, there will be a great deal, both from Britain itself and from abroad, of the closest concern to those interested in British archaeology. Above all, a Congress like this affords a pleasant chance of making personal contacts with fellow-archaeologists abroad—perhaps indeed this is really the most valuable thing about it.

The subscription is 25 Norwegian crowns (about 25/–). The cost of the journey and accommodation is not great, and the opportunity not only of attending the Congress, but of seeing the magnificent antiquities that Norway has to show, is a particularly fine one. We all know something about the Vikings, but how many of us have actually seen the Oseberg ship and her wonderful store of treasures ? We hope that many of our readers will go, and suggest to those who cannot that they might well subscribe all the same for the sake of the volume of ' Proceedings ' which they will thus receive free when it appears. It is sure to be invaluable.

HORNS AND SKULLS ON BUILDINGS (PLATE VII, B)

With reference to the custom of affixing horns and skulls to buildings, I have noted this procedure practised by Yezidis and Kurds in northern Iraq and by villagers between Isfahan and Shiraz, Iran. Near Ba'adri the Yezidis have set several pairs of ibex horns into the base of one of their sacred buildings. This tomb of a saint, constructed in the form of an inverted, fluted cone, is typical of Yezidi sepulchres. Over the door-lintel of a Kurdish house in Aqra hung an ibex skull with horns. At Meyhir, 52.5 kilometres south of Isfahan on the main road to Shiraz, there stands a large tower with a ring of ibex horns set in the wall around the top. The ibex (*Capra aegagrus*) symbolizes strength and physical endurance, and the horns are decorative in form as well as symbolic in character.

With regard to curious scare-crows, I have seen the pelvis and vertebrae of a camel used for this purpose by Arabs in Central Iraq. In other sections of Iraq I remember that camel skulls were set up as scare-crows. This recalls the photographs taken by Mr O. G. S. Crawford in Abkhasia, U.S.S.R. (see ANTIQUITY, September 1935, p. 356). The accompanying illustration was obtained in 1925 within a mile of the Field Museum—Oxford University Joint Expedition camp at Tell-el-Uhaimir (Kish). HENRY FIELD.

THE ORIENTATION OF BABYLONIAN MAPS (PLATE VIII)

Professor THEOPHILE J. MEEK, of the University of Toronto, writes :—In Eckhard Unger's very interesting article ' Ancient Babylonian Maps and Plans ', in ANTIQUITY (September 1935, IX, 311–22), he makes no reference to the important Old Akkadian map of *c.* 2500 B.C. found at Nuzi. The discovery of this was announced and

illustrated in April 1931 in the *Bulletin of the American Schools of Oriental Research* (no. 42, pp. 7 ff). In a later number of the *Bulletin* (no. 48, pp. 2ff) I gave a fuller discussion of the map, and followed this up by an article in the *Annual of the American Schools of Oriental Research*, 1933, XIII, 1 ff, with a photograph on p. 12. The final edition of the map is to be found in my recently published *Old Akkadian, Sumerian, and Cappadocian Texts from Nuzi* (Harvard University Press, June 1935).

In §9 (pp. 318 ff) Unger has a good deal to say about the orientation of ancient Babylonian maps, and arguing by inference he comes to the conclusion that in Babylonian orientation the north, or more accurately the northwest, was at the top.[1] If he had consulted the map from Nuzi, there would have been no need to argue by inference, because the directions are written on the sides of the tablets, and he would have discovered that in this particular instance at least the top of the tablet is east (IM-KUR), the bottom west (IM-MAR-TU), and the left side north (IM-MIR), with the opposite side south, but the name is here unfortunately broken away. It is to be noted that the words for the directions are those that are used on the Obelisk of Manishtusu, A IX, 13 ff,[2] *viz.*: IM-KUR, ' mountain wind ', *i.e.* ' east ' ; IM-MAR-TU, ' west wind ' ; and IM-MIR, ' fierce wind ', *i.e.* ' north '.[3] That the map is to be placed with its top east rather than north is clearly manifest from the writing on the tablet. The chief inscription in the centre of the tablet definitely requires that, as do most of the others. The only inscription that at all militates against this is the city name ' Bi-ni-za- . . . . ' which name was manifestly written by the scribe when he had the tablet turned to write the directions ' north ' and ' south ' on it.

The fact that the map from Nuzi is so definitely oriented with ' east ' at the top raises the question whether Unger is right in maintaining that the maps which he discusses are oriented with the north or northwest at the top. He is unquestionably right in his contention that Babylonian ' north ' is strictly ' northwest ', as has long been apparent to scholars, but there is nothing to prove that any of his maps are oriented with the northwest at the top. It is possible, but not certain, and the map from Nuzi would make it very improbable. The Babylonian map of the world proves nothing, because it is crudely

[1] So also Langdon, *The Museum Journal*, VII, 263.

[2] Published by Scheil, *Délégation en Perse*, II, 6 ff.

[3] In the later period the name for ' north ' came to be IM-SI-DI, *i.e.*, ' favourable wind '.

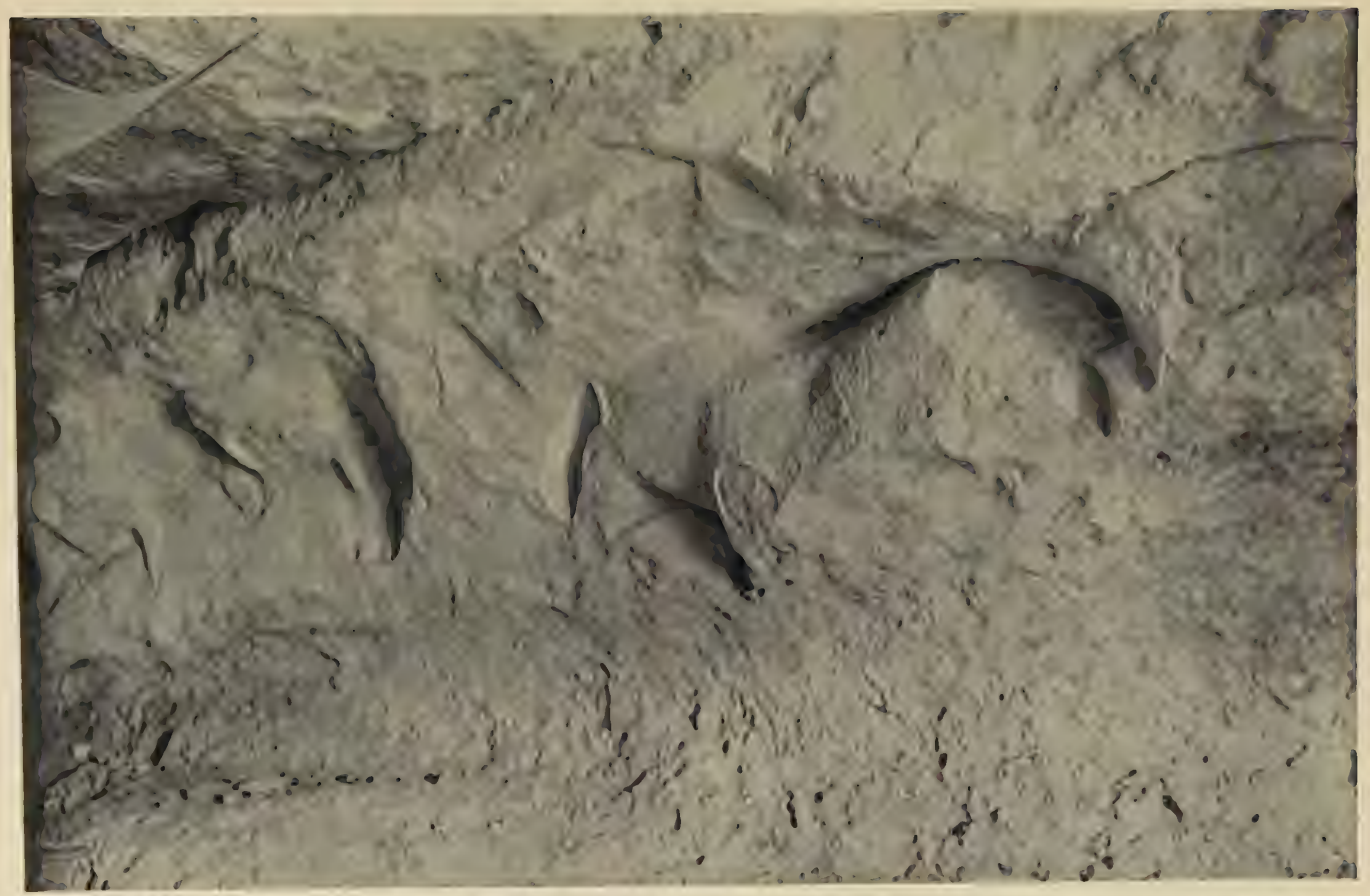
PLATE I

HORSE SCULPTURED ON WALL OF ROCK SHELTER, CAP BLANC NEAR LES EYZIES [illegible]E: MAGDALENIAN PERIOD (*See* p. 208)
Ph. Alexander Keiller

facing p. 224

HORSE SCULPTURED ON WALL OF ROCK-SHELTER, CAP BLANC NEAR LES EYZIES, DORDOGNE | MAGDALENIAN PERIOD (*See* p. 208)

Ph. Alexander Keiller



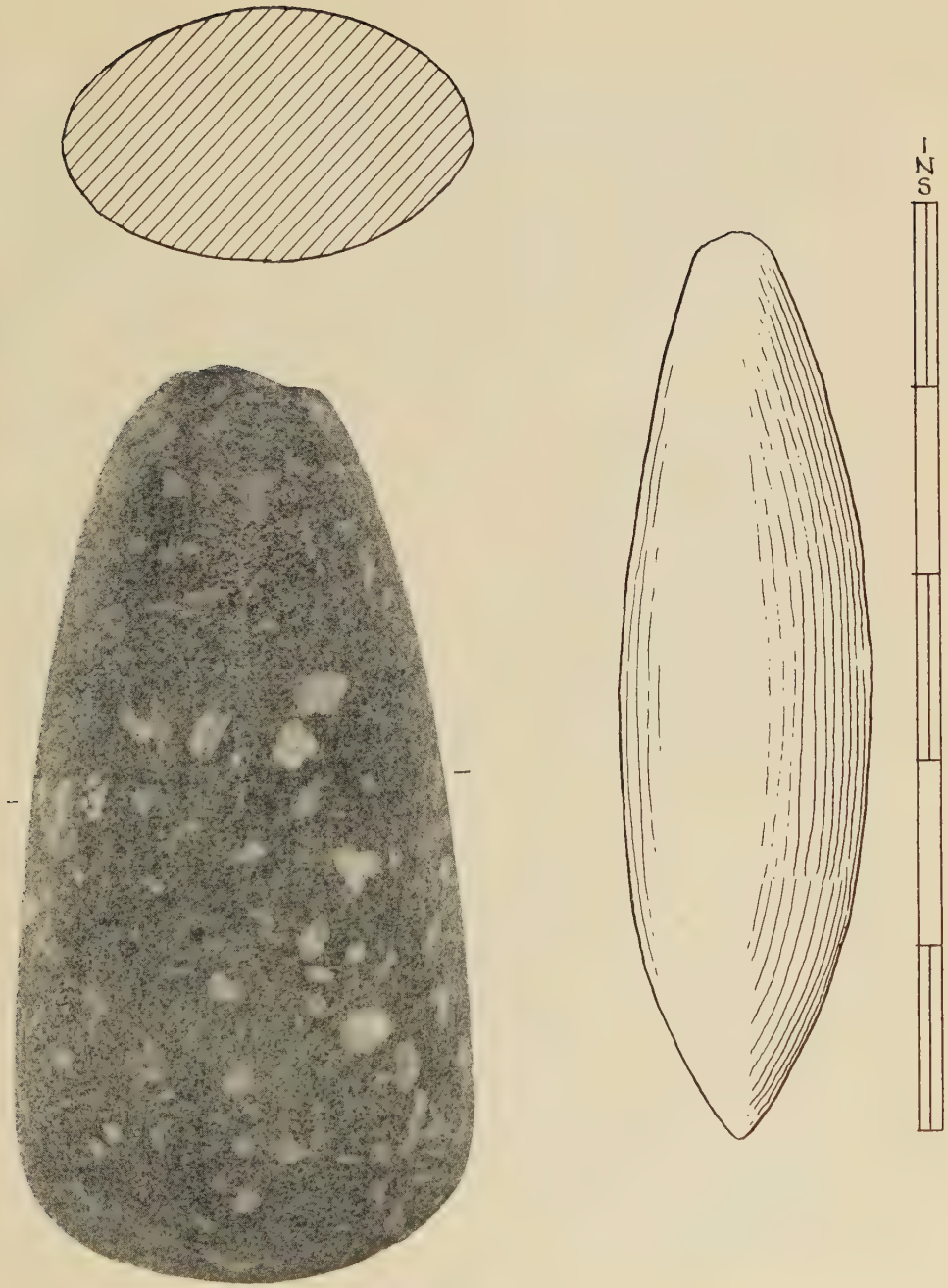
HORSE SCULPTURED ON WALL OF ROCK-SHELTER, CAP BLANC NEAR LES EYZIES, DORDOGNE: MAGDALENIAN PERIOD (*See* p. xxx)
Ph. Alexander Keiller

PLATE IV

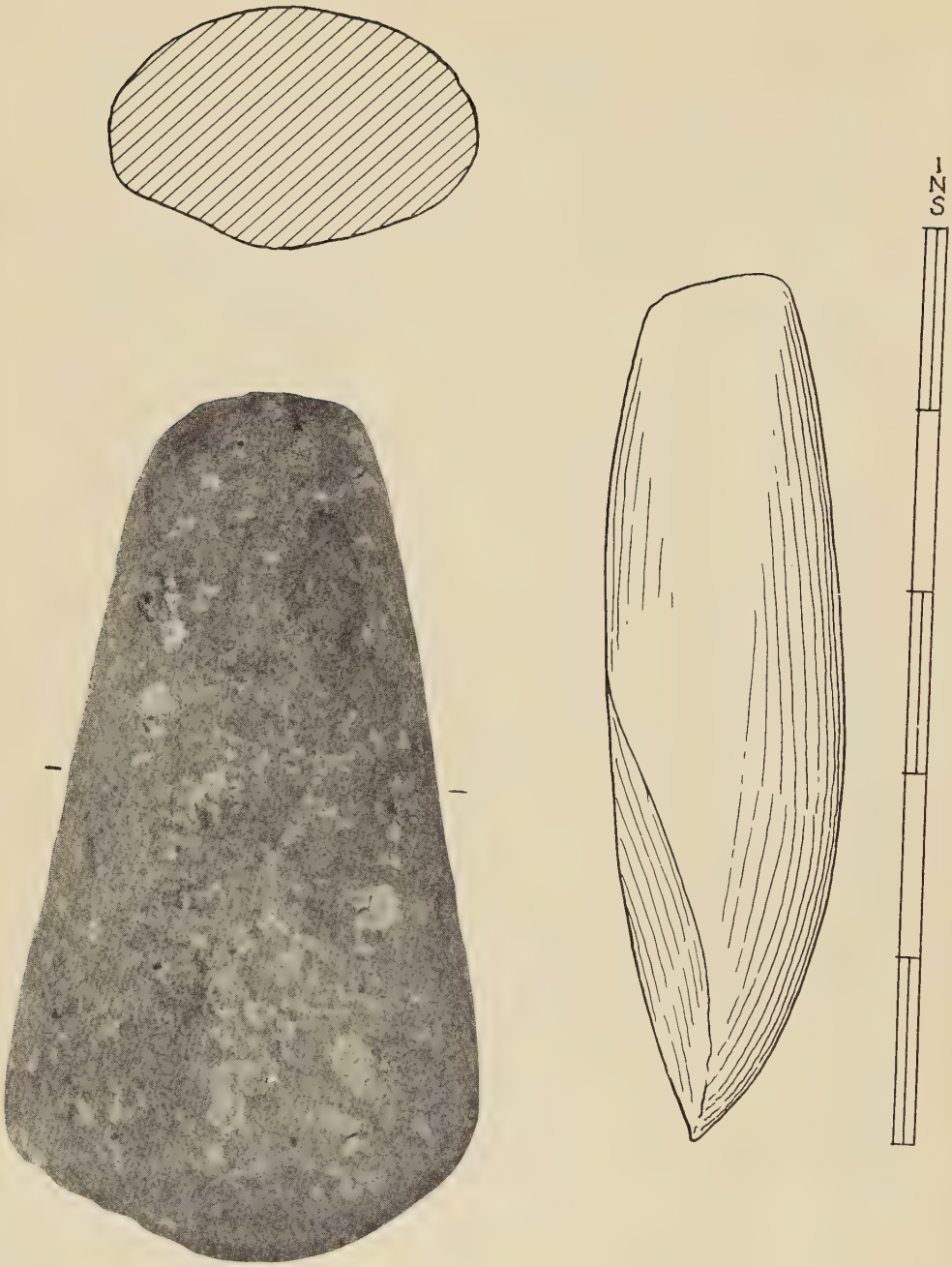
GENERAL VIEW OF ROCK-SHELTER AT CAP BLANC (*See* p. 209) SHOWING ROCK-SCULPTURES AND SKELETON (UNDER GLASS CASE)

Ph. Alexander Keiller

PLATE V

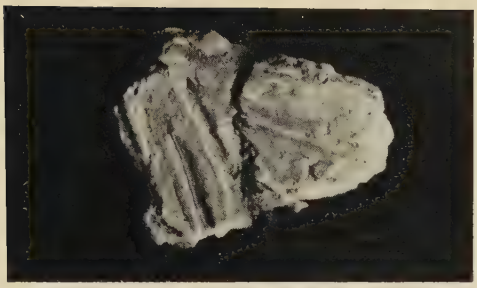


AXE OF PRESELY STONE FOUND IN CARCLINTY BOG, CO. ANTRIM, IRELAND (*See* p. 220)



AXE OF PRESELY STONE FROM CO. ANTRIM, IRELAND (*See* p. 220)

PLATE VII

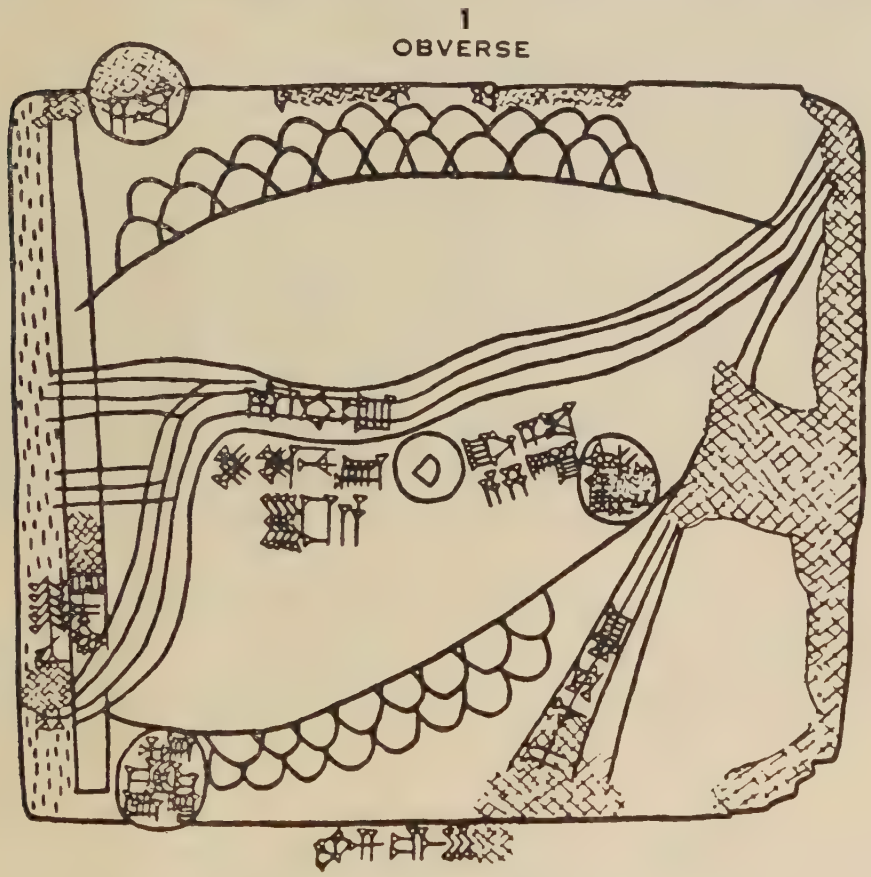


A. POTSHERD FROM THE PRIMARY SILTING OF THE STONEHENGE DITCH.
SALISBURY MUSEUM. FULL SIZE (*See* p. 221)

B. SCARE-CROW IN FIELD NEAR KISH, IRAQ (*See* p. 223)
Ph. Henry Field

AKKADIAN MAP, *c.* 2500 B.C., FOUND AT NUZI (*See* p. 223)
By courtesy of the Harvard Semitic Museum

and most inaccurately drawn, as scholars have universally recognized :[4] the Tigris is not indicated at all ; Babylon and Assyria are not represented in correct relation to each other ; and the other cities and districts



AKKADIAN MAP FOUND AT NUZI (cf. plate opposite)

are not in anything approaching a correct geographical order. Likewise the map of Nippur proves nothing. As King has well said,[5] the relation of the details indicated on the map to the remains uncovered in the

[4] See, *e.g.*, S. Smith, *Early History of Assyria*, p. 85.
[5] *A History of Sumer and Akkad*, p. 88.

course of the excavations at Nippur is largely conjectural, and the top of the map could just as well be northeast as northwest. In that case the map is correctly placed by Fisher[6] and others, and not incorrectly, as Unger maintains. This would make the canal drawn across the map run northeast and southwest, and that is exactly the direction in which it did run, as the excavations showed.[7] With the Nuzi map so explicit on the subject, the Babylonian orientation of maps must have been with the northeast, Babylonian ' east ', at the top.

I am sorry that Unger took no account of the map from Nuzi in his article because its interpretation is somewhat of an enigma. For my own part I believe that it was drawn to locate an estate near Nuzi, somewhere between the Zagros Mountains and the chain of hills running north and south through Kirkuk.[8] As noted from the accompanying photograph (PLATE VIII) of the map, it represents a region bounded in the east and west by mountain ranges and traversed by two rivers or canals. There are three cities marked by circles, with their names written within the circles, and in the centre of the map is another circle flanked on either side by an inscription that may be read 10 BUR 10 BUR minus 6 GAN MA (the numeral 4 written as subscript) –A *ša-at A-za-la*, *i.e.*, ' 180 + 180—6 (354) *gan* or *iku* of cultivated land belonging to Azala '.

[6] *Excavations at Nippur*, I, pl. 1.

[7] See the plan of Nippur by Fisher, *op. cit.*, p. 10.

[8] For a full discussion see the works cited at the beginning of the present article.

Current Comments

The section of ANTIQUITY hitherto called ' Recent Events ' had a tendency to become a rather dry collection of snippets from press-cuttings, and it is proposed therefore to vary it, as an experiment. Readers are invited to comment upon the change, and to contribute items themselves. These latter should be sent in the form of a separate paragraph on a separate sheet of paper, so that it may be filed until needed for use.

It is proposed to publish here not only news items in the strict sense, but also observations and comments. In this way we hope to bring the section into closer touch with discovery and research. Certain of the items must inevitably seem trite or commonplace. On the other hand it is hoped that some of the writer's observations may be found useful by students, for he has naturally selected for record those which he knows to be connected with current problems.

These notes are being written in Copenhagen, and it is natural to begin with the Danish National Museum, the home of modern prehistoric archaeology. How many people know that a complete wooden plough is exhibited there, found in peat at Traesager? It is about twelve feet long, and is dated 400–0 B.C. Four wooden yokes are exhibited in the same case.

In a recent paper read before the Society of Antiquaries of London it was suggested that the jet bead from the Notgrove (Gloucestershire) long barrow was connected with the double-axe amber beads of Scandinavia. There are very many of these in the Copenhagen Museum, and some of them have departed quite far from the original type ; but it is to be observed that all of them are perforated through the narrower axis of the bead, not, as in British specimens, through the longer axis. But the suggested analogy may well be correct nevertheless. Some of the Danish double-axe beads also were found in megaliths, *e.g.*, those in room 6, case 7, from a Jaettestue, that is, a Giant's Grave, at Graese, Nord Sjaeland.

The Danish prehistoric period was rich in gold finds, and there are two gold lunulae, one plain, the other ornamented with parallel grooves. The latter specimen has been broken in antiquity and mended by pierced holes through which no doubt some fibre or string was passed. Like the German specimen from Schulenburg, near Hanover, the width of the gold ribbon is narrower than most of the specimens from Ireland, the home of lunulae.

The presence of rows of highly conventionalized birds on bronze buckets and clay pots, a feature of the Hallstatt period, has been recorded in Brittany and Cornwall (Chun Castle). A similar bird-procession occurs on a Late Bronze Age (' 800–400 B.C.'), handled pot in room 12, case 3. Below the birds is a band of triple-arch ornament. No locality is given.

One of the most interesting exhibits is a series of potsherds with impressions of grain. These are in room 6, which is devoted to objects found in Jaettestuer, and dated 2500–1800 B.C. They are primarily important as evidence of agriculture at the date which is fixed by the pottery ; but there is a technological aspect also. For these impressions got there doubtless through the admixture of straw with the clay to bind it—a practice long recognized as characteristic of Anglo-Saxon pottery. It is particularly interesting to find it in use as early as the megalithic period in the original homeland of the Anglo-Saxons.

In the Copenhagen Museum such potsherds are shown with a small white circle indicating the grain-mark. One wonders whether similar marks have been found on Anglo-Saxon—or any other—urns in Britain ? (A few such have been already recorded ; see for instance ANTIQUITY, 1927, I, 263).

There is a fine model, on a geologically coloured relief map, of the Danevirke, a linear earthwork running across the Cimbric peninsula from Hedeby on the Baltic to the river Trene, flowing into the North Sea. We hope to publish a full account of this at a later date.

In the central courtyard are erected some passage-graves and other megalithic burial-chambers, and some boulders with sculptured designs of various periods.

The arrangement of the Museum is of course chronological; the rooms are not too well lit, especially room 2, containing finds from the famous kitchen-middens, and it is not easy to see the specimens in the wall-cases. The hours of opening are short and most inconvenient (12–3) and seem specially designed to impose a mid-day fast upon the student. Partly no doubt in consequence of this the galleries are so crowded with sightseers during the short period available that study and note-taking is difficult. Many of the rooms are quite small (36 by 27 feet), and there were often more than twenty people in them at a time. A student on a short visit during the period of a public holiday—the only period possible for many—needs the whole three hours every day of his visit, in order to see and study the wealth of material; and it is closed altogether on Sundays.

Nevertheless it would be most unfair to end on a note of criticism. The Museum in such other essentials as arrangement and labelling is admirably up-to-date, and compares favourably with most others. As for overcrowding, that is, after all, a tribute both to the Museum authorities and to the people of Denmark, who obviously appreciate their wonderful heritage of prehistory. Nor are the cases overcrowded with a bewildering assortment of objects. It is also a pleasure to be able to make notes openly, without feeling like a criminal being watched by a detective.

Copenhagen is now within a day's flight of London, and the air-passage is interesting. One is struck by the close resemblance of Holland to our own Fen Region; there are the same narrow dyked grass meadows and the same black peaty moors splashed with white sand or silt. The resemblance may be in part superficial, but it is also in part well grounded. The meanders of extinct watercourses are plainly visible, especially near the aerodrome outside Amsterdam. On the other hand there are no traces of 'Celtic fields' to be seen anywhere along the course of the route. That is strange, because it is known that such occur in the province of Drenthe, Holland (see ANTIQUITY, 1928, II, 85–7).

One is all the more impressed by the extreme richness of England in field-archaeology, and the urgent need of recording all that there is before it is obliterated by the 'advance of progress'. Paramount is the need of a complete air-survey of the Fen region.

Another reflection suggested by such a flight is the geographical contrast between Britain as a whole and the Low Countries. Between Rotterdam and Copenhagen there are practically only two types of country—fen and moor, both mostly reclaimed. It would be impossible to cover a similar distance over England without passing over many different types. The landscape of our island is far more diversified than any region of the same size elsewhere in Europe; and that, with the climate, explains most of the fundamental traits of our national character. (The remainder have a social origin not unconnected also with geography).

An important discovery has been made at Sakkara, ten miles south of Cairo. Sakkara is best known for its Step Pyramid (see ANTIQUITY, 1928, II, 461–3). It was close to Memphis, the ancient capital of Egypt, whose necropolis was situated here. Mr W. B. Emery, an English archaeologist and a former pupil of Professor Peet of Liverpool University, was continuing the excavation of a First Dynasty tomb which had been interrupted in 1931 by the untimely death of Mr Cecil Firth. The work has now been resumed by the Egyptian Department of Antiquities.

It appears that a series of forty-two store-chambers were concealed in the walls of the tomb by a casing of brick that appeared solid. Consequently the chambers had not been suspected during the earlier work carried out there. About half of them have been cleared and the contents removed to the Cairo Museum, where they are now exhibited. Amongst the objects are curved wooden sickles with flint teeth, a leathern quiver and arrows with ivory (?) and flint points, a gaming-box, a plaque with a hunting scene (dog chasing antelope), the usual array of pots, some with inscribed sealings, and 'discs of stone, bronze or ivory'. Flint knives more than a foot long were also found, and 'an inscribed ebony tablet bearing the name of Pharaoh Zer'.

Apart from the actual finds, which of course are mainly valuable because of their age and because they can be accurately dated, the tomb is remarkable because ' most of the kings and noblemen of the First Dynasty were buried in Lower Egypt ' (Prof. Glanville, as reported in the *News-Chronicle*, 7 April). The objects form the largest collection of relics ever found in a tomb of this early date, several centuries before the Pyramids of Giza were built.

The discovery also has an amusing side. The tomb belongs to the First Dynasty, which is placed in the second half of the fourth millennium B.C. by the vast majority of Egyptologists,* who have never accepted the earlier chronology of Sir Flinders Petrie. This earlier system, however, still seems to fascinate Fleet Street, which is generally behind the times in such matters. Accordingly we are treated to a bewildering confusion of dates and names.

The first announcement appeared on 6 April, in the *Birmingham Post* and *Liverpool Echo*. The first, whose archaeological news is usually accurate and often exclusive and authoritative, dated the tomb ' back to 5000 to 6000 years ', whether B.C. or ' ago ' not stated, but presumably B.C., since the First Dynasty, in Petrie's system, is dated 4940–4777 B.C. ; and this is the date assigned to the tomb by the *Liverpool Echo*.

The next day the *Daily Telegraph* announced it, in a caption, as a ' tomb of 5000 B.C.' reverting to 5500 B.C. in the text, but adding further confusion by the statement that this was ' 2000 years before Tutankhamen ', who came to the throne in 1358 B.C. ! The *News-Chronicle* of the same day preferred the orthodox shorter chronology, dating the First Dynasty to ' about 3200 B.C.'.

During the night the *Telegraph's* Cairo correspondent received enlightenment, and announced without a blush the ' wonders of a

* Breasted gives the period covered by the first two dynasties as 3400–2980 B.C. *History of Ancient Egypt*, 1925, p. 597.

tomb of 3500 B.C.', coming down to 3000 B.C. in the text. But the *News-Chronicle* meanwhile had raised the price to 3400 !

Finally equilibrium was reached at ' approximately 3000 B.C.', in *The Times*, whose first announcement, appearing the following day (9 April), is the last to hand at the time of writing.

The two chief victims of this unsought publicity are the dead man and the discoverer, to whom one offers both congratulations and sympathy. The former appears as a ' nobleman of the time of King Zet', ' Grand Vizier to [*sic*] King Den or Udymu ' ; while the latter is variously described as ' tall, bespectacled, Liverpool-born ', a ' young Briton ', a ' thirty-year-old Englishman ', a ' 33-year-old Liverpool man ', ' the Liverpool archaeologist ' and ' a young English Egyptologist '.

The attitude of the specialist towards such errors and absurdities is usually one of indifference mingled with contempt. We have always believed that that attitude is a mistaken one. It is, in any case, not the attitude of the specialist when he wishes to enlist the services of the press to further his own ends, to raise money for a dig or stop a piece of vandalism, for instance. On such occasions he usually receives generous and often enthusiastic support ; and it is up to him to make some return. After all the press is a useful link between him and the taxpayer who (in most cases) pays him his salary.

In this case there is, unfortunately, a substratum of truth in the accusation of the *News-Chronicle* (leaderette of 7 April) that ' the learned have been wrangling for years ' over the ' misty chronology and history of early Egypt ' ; though ' wrangling ' is perhaps too harsh a word to use of those whose only aim is the discovery of the truth. It is therefore desirable that ' the learned ' should throw the onus upon Fleet Street.

Would it not be possible for some recognized authority, such as the British Museum or one of the learned societies concerned, to issue a short pamphlet setting out in tabular form the orthodox chronology of Egypt, with the names of the kings ? It is impossible to explain its intricacies in a telephone interview, but on such occasions it would be easy to refer the interviewer to such a pamphlet for details.

An occupation site amongst the sand dunes of the West Cumberland coast was discovered at the end of the summer of 1935, typologically similar to others at Glenluce in Wigtownshire, on the Ayrshire coast, and elsewhere.

Unfortunately the weather broke before more than a preliminary examination could be made of the site, and the constant shifting of blown sand makes work there always difficult, but it is hoped that during the present summer it may be possible to carry out full examination of an interesting place full of possibilities. Amongst the finds already made are flint artifacts (the first of this class recorded for the district), and chips, potsherds of different types from Roman to medieval, extensive remains of iron-smelting, traces of bronze working, innumerable pot-boilers, and a leaden spindle-whorl. A preliminary report of the site (the first sand-hill settlement to be recorded for Cumberland) will appear in the 1936 volume of *Transactions* of The Cumberland and Westmorland Archaeological Society.

The British School at Rome is hoping to continue the excavation this summer of a Roman building at Cnossus which was partly investigated last year by Sir Arthur Evans and the British School at Athens (see *Journ. Hellenic Studies* 1935, pt. II), and at the same time to survey and record such remains of Roman Cnossus as are still above ground. The activities of the School in Italy have been curtailed owing to the political situation (though the School and Library are still kept open for any who wish to make use of them) and the Faculty of Archaeology has welcomed the opportunity of carrying out excavations in Crete. An appeal for funds will shortly be made.

Reviews

A HISTORY OF THE ANGLO-SAXONS. *By* R. H. Hodgkin. *Oxford : Clarendon Press*, 1935. 2 *vols.*, *pp.* xxvii, 387 ; xii, 366, 85 *plates* (4 *in colour*), 34 *maps*, *numerous text-figures*. 30*s*.

In recent years much important work has been done on the history of Anglo-Saxon England. But most of the work has been published in periodicals and, except for the specialist, it was difficult to estimate exactly what progress had been made. A synthesis was required and this synthesis is provided by Mr Hodgkin. On the whole the outlook of the book is distinctly conservative, but brilliant conjecture can hardly find a place in a book written essentially for students. The more important theories on any subject are usually given quite impartially and the author never emphasizes his own views unduly. The two volumes carry the history of the period down to the death of Alfred and, throughout, interest is ' focussed on the great men and the big subjects '. Such treatment is, perhaps, inevitable but it leads to definite gaps in the story. For example practically nothing is said of the history of Northumbria after the death of Ecgfrith. Little is known about it and that little is not important. Nevertheless concentration on the high-lights tends to give a false idea of the picture as a whole. Throughout the work Mr Hodgkin claims to have acted on the ' principle that an approximation to the truth is better than a complete blank '. This may be sound enough but it leads later to the dictum that ' it is better to make mistakes than to leave complete blanks '—a much more questionable statement.

The first volume opens with a discussion of the continental homes of the Anglo-Saxon invaders and with a picture of the last age of Roman Britain. Mr Hodgkin apparently agrees with most historians in placing the end of Roman rule during the early years of the fifth century. But the documentary evidence seems to point to a somewhat later date. The *Notitia*, the *Life of Germanus* and the writings of Patrick show a Britain which is still Roman until well into the second quarter of the century. Doubtful though the evidence of the *Notitia* may be, it is supported by the other documents. On the other side we have only the evidence of a Gallic chronicler, himself surrounded by his own fog of war and ready to believe the worst of the rest of the Empire, and the numismatic evidence. But, as Mr Hodgkin points out, Foord has shown that the evidence of the coins is inconclusive.[1] The Conquest is dealt with in detail with a full appreciation of the recent light thrown on the subject by archaeological research. Perhaps more use might have been made of the Celtic sources. The monographs of Canon Doble on the Cornish saints and the recent work of the Rev. A. W. Wade Evans[2] contain some interesting, if tantalizing, references to this period. Mr Hodgkin seems to repose more confidence in the account of the foundation of Wessex, as given in the *Chronicle*, than do most historians. He points out, quite rightly, that the archaeological

[1] E. Foord, *The Last Age of Roman Britain*, Harrap, 1925, pp. 27 ff.

[2] See especially his book on *Welsh Christian Origins*, Oxford : Alden Press, 1934 ; but this may not have been available in time for Mr Hodgkin.

evidence is merely negative. It gives no support to the story of the chronicler but, alone, it cannot disprove it. But the comparative lack of early burial-sites in Wiltshire and Hampshire is also supported by the rarity of place-names in *-ing*.[3] The two points together seem to be decisive. The settlement of the North is dealt with much more briefly than that of the South and Midlands. This is, in part, inevitable owing to lack of information. But rather more is available than would appear from this work as is shown by a recent paper on the subject by Mr J. N. L. Myres.[4] Mr Hodgkin has described the invasions skilfully and with caution. It is natural, however, that students of this period will disagree with some of his conclusions. The period bristles with so many problems that each scholar will have his own particular theories. As a primary source we have only the rhetoric of Gildas and, although it is interesting to note that his strictures on the Britons are supported by the somewhat later author of the *Life of St. Samson*,[5] as a historian he is only better than nothing. The story on the Conquest concludes with an interesting chapter on Heathen Society. Little material is, of course, available for such a chapter but what there is has been carefully collected by the author. Rather more evidence for heathen religion can be gathered from place-name material than Mr Hodgkin has realized; note the recent article by Professor Dickins on 'English Names and Old English Heathenism' (*Essays and Studies*, IX, 148 ff). Similarly in connexion with heathen sacrifices see the article on 'Place-Names formed from Animal-Head Names' (*EPNS*, XI, appendix I, p. 403). In dealing with the Conversion Mr Hodgkin, like most historians, seems to ascribe an undue importance to the mission from Rome. The mission of Augustine was essentially a failure and, after an initial success, the missions to Essex and to Northumbria also failed. Augustine converted Kent and a later mission from Rome converted Wessex, but Northumbria and Mercia were both converted from the North. The facts are given fairly enough by the author, but the importance of the Roman mission has been so often exaggerated that it seems necessary to emphasize its comparative failure. The fact that Christianity came to England mainly from the North is of the utmost importance in the history of English culture. The first volume closes fittingly with a description of the Golden Age of Northumbria, a description which may now be supplemented by the Bede Centenary volume.

The second volume, dealing with the period from the rise of Offa to the death of Alfred, is, perhaps naturally, less interesting. The Golden Age of Mercia under Offa is, owing to lack of materials, necessarily obscure. But it is perhaps dismissed more cursorily than it might have been. For example, the creation of the archbishopric of Lichfield is mentioned only in passing, but no general account of Offa's ecclesiastical policy is given. The history of Northumbria is almost completely omitted though, culturally, it is still important until the middle of the ninth century. Throughout the two volumes the evidence of the surviving Old English literature is well and wisely utilized. Here it is employed to show the change in the ideals of the Anglo-Saxons brought about by the Conversion. It is, however, hardly correct to say that 'the songs about the heroes of the heathen age, those for instance enumerated in *Widsith*, were to cease' because of the Conversion. Though none of the songs celebrating these heroes have

[3] This point has also been noted by Mr J. N. L. Myres, 'Britain in the Dark Ages', ANTIQUITY, December 1935, p. 464.

[4] J. N. L. Myres, 'The Teutonic Settlement of Northern England', *History*, December 1935, pp. 250 ff.

[5] See T. Taylor, *Life of St. Samson of Dol*, London, S.P.C.K., 1925.

been preserved, it does not necessarily mean that they were forgotten. On the contrary there is evidence that many of these pagan heroes were remembered until well on into the Middle Ages.[6] In describing the rise of Wessex, too much emphasis is probably placed on the importance of Ecgberht. Under Aethelwulf Wessex lost the *imperium* and declined rapidly in importance. The later greatness of Wessex is due rather to Alfred and his successors, to the fact that the Viking invasions struck down all rivals, so that Alfred's successors had to deal, not with strong kingdoms, but with the heterogeneous states of the Danelaw. There seems to be little reason—apart from the Viking invasions—why the Wessex of Ecgberht should not have gone the way of the Wessex of Ine.

The greater part of the second volume deals with the Vikings. The story of the invasions is told clearly and intelligibly, no mean feat when we remember the complexity of some of the operations. On Ragnar Lothbrok and his sons we may note the recent article by Dr A. H. Smith.[7] The ignominious end of Mercia is emphasized but it is hardly necessary to seek so far for a reason. The greatness of a kingdom depended simply on its king. We remember the similar collapse of Wessex under Aethelred II. That this collapse was due entirely to the incapacity of the king is shown by the later heroic campaign under Edmund. The alliance of West Mercia and Wessex under Alfred is rightly emphasized by Mr Hodgkin as one of the early steps in the unification of England. The closeness of that alliance is shown by the later Middle English dialects. The descendants of the West Saxon and the West Mercian dialects share many characteristics in common, due partly to this early alliance. The reign of Alfred is treated in considerable detail, partly because of the comparatively numerous authorities available, partly because of the undoubted importance of the king and his reign, and the volume ends with the death of Alfred.

In conclusion we may note three unimportant points. The *Loidis* of Bede is given as modern *Ledstone* (I, 150). Philologically *Leeds* is a more satisfactory identification, but the name probably referred to a region rather than to any specific place. On I, 379 the reference to Professor Stenton's article should read *Essays . . . Lane Poole*, 136–50, and not *Essays . . . Tout*, 136–50. On p. 711, *Tribal Hidage* is miswritten for *Burghal Hidage*

Mr Hodgkin is to be congratulated on the production of an eminently sane and readable book on the darkest period of English history. Even those who disagree with his conclusions must admit that the facts are given with strict impartiality. He has written not only a political history but a social history too. Remarkably little that has been written, even remotely, on the subject has escaped him. Most of the works mentioned above were probably published too late to be available. The main grievance of the scholar will be in the placing of the notes together at the end of each volume instead of at the foot of the page.[8] Any careful reading of the work is rendered intolerably difficult and it is to be doubted whether the general reader draws corresponding relief from this objectionable habit. Apart from this the two volumes have been admirably produced. The numerous illustrations and maps are excellent. Mr Hodgkin has

[6] R. W. Chambers, 'The Lost Literature of Medieval England', *Trans. of the Bib. Soc.*, March 1925, p. 293.

[7] A. H. Smith, 'The Sons of Ragnar Lothbrok', *Saga Book of the Viking Society*, XI, part 2, p. 173.

[8] We wish to call attention to this criticism, which is continually being made in the reviews we publish.—EDITOR.

recognized the value of illustrations for a period in which so much of the material is archaeological. The continuation of this history will be eagerly awaited by all students of the Anglo-Saxon period. R. M. WILSON.

LES MONUMENTS MÉGALITHIQUES DE PALESTINE. *Par* MOSHÉ STÉKÉLIS. Archives de l'Institut de Paléontologie humaine, Memoire 15. *Paris: Masson*, 1935. 50 *francs.*

M. Moshé Stékélis prefaces his report of his own excavations in the necropolis of El-Adeimeh, five miles from the north end of the Dead Sea, with an invaluable summary of previous work on megalithic monuments in Palestine, and also with a detailed synopsis of the prehistory and protohistory of the country.

A distribution-map indicates the position of the principal groups of caves and megaliths, the latter being often placed in the neighbourhood of springs.

Most of the 'dolmens' examined by M. Stékélis are simple cists often contained in a cairn bounded by a circle of stones. Sometimes the cairns are grouped so closely together that they tend to amalgamate, or to be connected by lines of walling.

Brief accounts are given of the dimensions and contents of 168 of these cists, together with plans of some 35, and of 7 of the tumuli. More plans of these would have been welcome.

Most of the cists were simple rectangles containing badly preserved bones of crouched skeletons; with five exceptions all are oriented east and west. On the broken cover of one are incised meandering lines, which, to judge from the two fragments illustrated, do not seem to have formed part of any recognizable pattern which might be compared with more western megalithic carvings.

A number of hearths were found, circular, oval, rectangular and horseshoe shaped, and sometimes covered by a tumulus; in one case five were found under one mound without any trace of burial or cist. On the hearths were quantities of ashes and burnt soil, but no pottery. Around the five already mentioned as occurring under one tumulus however, were great quantities of fragments derived from hundreds of vessels (*tessons de terre cuite*).

One interesting feature is a very curious 'circle of stones' 30 metres in diameter, consisting of a great number of thickly clustered uprights .35 m. in height arranged in an uneven ring. The stones stand in irregular rows five to six deep in places; elsewhere they are only two deep; apparently all are embedded in a bank. M. Stékélis records the discovery within the circle, as the result of excavation, of fragments of pottery similar to those recovered from the tumuli, but does not say whether he considers that the purpose served by the circle was residential or ritual. One detail of the plan rather suggests the latter, as it indicates what looks like part of an outer circle of single stones, two of which are doubled at the eastern side as if for a ceremonial entrance, as in British examples.

M. Stékélis rightly rejects Mr Turville-Petre's assignation to the Roman period of the 24 'dolmens' in Galilee near Kherazieh examined by him for the British School of Archaeology in Jerusalem in 1930, and dates all the Palestine groups to the end of the Stone Age, *i.e.*, the dawn of the æneolithic, although one of his reasons for so doing, the complete absence of metal, is not convincing. Ultimately no doubt the question of date will be settled more precisely by the pottery recovered from the burial mounds and chambers.

M. Stékélis concludes this most valuable and painstaking record with a bibliography of 147 publications on the megaliths of Palestine. We shall be fortunate if it is increased in the future by more memoirs of the same quality as that under review. W. J. Hemp.

Teleilat-Ghassoul, a few miles north from the Dead Sea, has provided the type station for the ' éneolithique ' Ghassoulian culture of the Jordan valley and Transjordan, distinguished by R. Neuville from the contemporary Tahounian of eastern Palestine. The Ghassoulian is as yet little understood, but its position will soon be clarified by the publication of significant evidence from Jericho. Meanwhile M. Stékélis has excavated and obtained a quantity of pottery from the necropolis of El-Adeimeh, a cemetery of cist-graves and cists-in-tumuli lying close to the town of Teleilat-Ghassoul. He divides the pottery into two classes, a funerary hand-made and a domestic wheel-turned group, the former being found exclusively in the cist-graves, the latter exclusively round the hearths which lay under several of the tumuli. No clear classification of the two classes is provided, and some types, notably the globular pots attached to hollow feet called *calices à pieds*, appear to occur in both (cf. pp. 70 and 78). The distinction thus unfortunately ill-defined is an important one, for whereas the domestic pottery corresponds exactly with that from the Teleilat-Ghassoul, the funerary types are naturally less closely paralleled there.

One of the most distinctive of the funerary wares is the hollow-based stand or *vase en forme de diabolo* which presumably should be regarded as a detached version of the high hollow foot of the *calice à pied*; it is of special interest for the close resemblance it bears to the vase supports of the west European Chassey culture.

M. Stékélis' excavations are most valuable for the light which they throw on the burial practices and pottery of the Ghassoulians, but how can his claim be substantiated that they prove these people to have been among those responsible for the construction of Palestinian megaliths ? The only true ' dolmen ' in the neighbourhood of the necropolis, like all megaliths previously excavated in Palestine, yielded nothing of value when opened by Stékélis. The cists of the cemetery were small, built with modest-sized stones, and sunk below ground level ; there is nothing in this paper to prove their close affinity with the megaliths beyond the unqualified statement (p. 37) that ' *les cistes ne diffèrent des dolmens que par leurs dimensions réduites* '. Nor is the fact that the Ghassoulian culture has a very different distribution from the megaliths in any way explained.

Unless substantial finds are made in some of the megaliths themselves it seems that M. Stékélis' attempt to attribute them even partially to the Ghassoulians must remain unsupported. Jacquetta Hawkes.

ARYBALLOI AND FIGURINES FROM RHITSONA IN BOEOTIA : an account of the early archaic pottery and of the figurines, archaic and classical, with supplementary lists of the finds of glass, beads and metal, from excavations made by R. M. Burrows and P. N. Ure in 1907, 1908, 1909 and by P. N. and A. D. Ure in 1921 and 1922. *By* P. N. Ure. (Reading University Studies). *Cambridge University Press*, 1934. *pp.* 107, *with* 9 *figures including folding plan, and* 21 *plates.* 21*s.*

Visitors to the Thebes museum will remember the serried ranks of the cemetery-finds from Rhitsona, kept strictly according to graves and stacked, on account of the

demands of space, like tea-services in a china-shop ; an impressive reminder of the sometimes neglected fact that there was quantity-production in Greece. This kind of storage is not very regrettable on the score of artistic merit, and on scientific grounds the care with which graves have been kept separate deserves high praise. The same spirit has animated their publication, which this book completes. Professor Ure has admirably avoided the temptation to go beyond his purpose by drawing other than scientific conclusions of a purely archaeological kind from his material, which could, in the proper place, be made the subject of economic and sociological speculations. For the present work, thanks are due both to him and to the University of Reading, which met the costs of publication : we note the many excellent plates, and the moderate price.

This pottery came from graves dating from the Geometric period (8th century) to the early part of the 6th century : the figurines range from their first appearance at Rhitsona, about 600 B.C., to the 3rd century B.C. Sections on glass, beads and metal objects are added. Moreover, an appendix gives a list of other sites which produced parallels to the Corinthian aryballoi and bombylioi from Rhitsona burials, and the publication of the whole past excavation of the site is concluded by a full list of the contents of all the graves not hitherto published ; so this book is indispensable for a full study of the site.

The pottery chronology is based on the evidence of the site itself, compared with the finds from Sicilian and South Italian cemeteries preserved in the local museums, which Professor Ure has visited. We have thus, for the Corinthian pottery, a judgment independent of Mr Payne's *Necrocorinthia* : the conclusions are very similar, although Professor Ure has reason to modify Mr Payne's scheme (Professor Ure consistently puts back the dates a few years, and regards as middle Corinthian much that Mr Payne classes as early) so far as Rhitsona is concerned. But, as he says, this apparent difference reflects a difference of object. Mr Payne is establishing an artistic canon, Professor Ure recording practically only aryballoi, as exported from Corinth to Boeotia and found in graves there : it is not surprising if some reservations have to be made about such products and if artistically they lag behind the most advanced contemporary output. It is precisely to a question of this kind that a work like this helps to point an answer.

Of the graves which contained aryballoi, the ' Corinthian ' were more numerous and richer than the pre-Corinthian. One grave had nearly 300 vases, others over 30 ; half-a-dozen was the average content of the pre-Corinthian graves. Burial customs are traced, and shown to have been very local, and to have varied from time to time.

Nomenclature is usefully discussed, and some deviations from the practice of others are suggested in partitioning the names (aryballos, lekythos, bombylios and alabastron, with sub-divisions) among the shapes.

From the Geometric period onwards, pottery was imported as well as made locally ; significantly, the imports are referred to that part of the Peloponnese which makes them the precursors of the Protocorinthian and Corinthian pottery which characterizes the later periods. An interesting point is the burial in a child's grave of an early Protocorinthian vase which was evidently an heirloom, perhaps 150 years old when it was buried: there are parallels, and the subject is one which demands consideration in its general setting elsewhere.

As part of a specific excavation report, as a contribution to the study of particular classes of pottery, and as an accurate statement of facts which contribute to more general issues, this book deserves unstinted praise. W. L. CUTTLE.

BRONZEZEITLICHE UND FRÜHEISENZEITLICHE CHRONOLOGIE. Teil v, MITTELEUROPÄISCHE HOCHBRONZEZEIT. *By* NILS ÅBERG. *pp.* 162, *Stockholm*, 1935. 25 *kr.*

In part II of his Chronology of the Central European Bronze Age Dr Åberg began by fixing the beginning of the Hallstatt period proper at 650 B.C. on the strength of a previous study of the Italian evidence in part I. In part III he fixed the beginning of the Continental Bronze Age at about 1600 B.C. on the strength of synchronisms with Troy and Mycenae elaborated in part IV. The last part is devoted to the typological division of the intervening thousand years. It has only an indirect bearing on absolute chronology, so that it can on the whole be judged without reference to criticisms of the previous parts that have appeared in earlier numbers of ANTIQUITY.* The immense mass of material falling within the scope of this book has inevitably been rather summarily treated ; only a small fraction of the types, mostly old friends, has been illustrated ; many monographs on the typology of regions or special forms, even of such magnitude as Blinkenberg's book on fibulae and Kraft's studies of southwest Germany have been entirely ignored ; and on the typology of some forms, such as anklets, the author is manifestly quite at sea.

Nevertheless this volume is as stimulating and important as its forerunners. It has always been an outstanding merit of Åberg's approach that he has fully appreciated the rôle of Hungary and her early Aegean connexions. And so here he will not be blinded by the Italian mirage that dazzled Montelius and Reinecke, nor yet by the Germanic mirage, pursued by Kossinna and his disciples. And so he presents the urns of ' Villanovan profile ' that appear in Hungary already in period II as the prototypes, not copies, of the North Italian ossuaries. And the situlae, cups and cauldrons of period IV are not, as we have always been taught, ' altitalische Geschirr ', but products of the region where they are found most abundantly, of a native Hungarian bronze industry that inspired the Villanovan rather than imitated it. And the same bronze industry played an equally dominating rôle over against the Germanic. Despite Sprockhoff's statistics showing that early flange-hilted swords, bronze cups and antennae swords are more numerous in the Germanic province than anywhere else, Åberg boldly claims a Hungarian origin for all three types. He very rightly notes how the truly Germanic types of sword, axe and gorget scarcely ever overstep the frontiers of the Germanic province ; he urges that the hammer technique was never highly developed in the north while it was the Hungarian craftsman's speciality ; he might add that restless barbarism during the Bronze Age and, during modern times, early industrialization combined with patriotic pride, have unduly weighted the figures of ' finds ' from the North.

The reversal of the mutual rôles usually attributed to Italy and Hungary would be no less welcome. Randall MacIver and other students of Italian prehistory have always been hankering after a Central European source for the basic elements of Villanovan culture, but have been unable to establish their guesses through ignorance of the Cisalpine material. Here is a plausible attempt to provide the proof by one who is personally familiar with both the Italian and the Hungarian collections. But it is an ineradicable defect of the typological method that by itself it cannot establish cultural movements between different regions, but only static synchronisms. On pure typology bronze vessels adorned with birds' heads in Hungary and Italy are just contemporary. Actually

* Parts I–II reviewed ANTIQUITY, 1931, V, 125, 385 ; part III, 1932, VI, 206 ; part IV, 1934, VIII, 363.

one region must enjoy a slight priority, but it needs extraneous considerations to decide which. Failing direct and independent links between each region and the historical Orient, the distribution in time of the material may be invoked as a criterion.

Åberg divides the thousand years of the Central European Bronze Age into five periods according to Montelius' system, assigning to each about two centuries. But it must be remembered that in Hungary, east of the Danube, there is strictly speaking no Hallstatt culture at all; the Iron Age begins with a 'Scythian invasion' that cannot possibly be put before 600 B.C. Hungary is in fact rather like Ireland, exceptionally rich in 'late' bronzes, but poor in Early Iron Age remains. Irish experience would suggest that a wealth in bronzes is due largely to an exceptional prolongation of the Late Bronze Age. Luckily in this case the Huelva spear-head gave a lower limit for the beginning of that period.

Åberg obtains a similar lower limit about 1200 B.C. from the appearance of 'Central European' swords in Greece and Egypt. As in my own chronology, 1200 is taken as the beginning of period III, but to period II are assigned not only hoards with battle-axes and rapiers, and cemeteries with Pannonian ware, but also the first octagon and flange-hilted swords, the prototypes of Kraft's Rixheim form, some double-edged razors, and even urnfields like Zagyvapálfalva, all of which I classed as Late Bronze Age. And so in period III we have an imposing number of hoards, comprising not only slashing swords and socketed celts, but even the 'Hallstatt bird' and a whole series of fibulae from the violin-bow type to the elaborate Hungarian 'posamentariefibeln' and simple spectacle brooches. Hemispherical cauldrons with T handles, situlae, embossed cups, swords with cupped pommels and certain not very clearly defined socketed axes serve to characterize period IV. Finally in V we have antennae swords, normal spectacle brooches and bronze cups of 'Arnoaldi style' distinguishing a comparatively small number of hoards.

Now a further inherent defect of typology is caused by the uneven evolution of the several types studied. Different types undoubtedly evolved at different rates. But on the strictest application of the method any assemblage of such types should be dated by the latest element in it. Pushing logic to an absurdity any find containing the 'Hallstatt bird' should be dated to the Hallstatt period. On a more moderate interpretation a typological overlap between two periods would be a valid objection to extending such a period over two or more centuries. The Hungarian swords assigned by Åberg to period II (Reinecke C2) are only distinguished by minor details from South German types of period III (for which incidentally no distinctive Hungarian developments are cited). The Hungarian fibulae of period III 'survive, practically unchanged' throughout period IV to appear still in hoards of period V. The cauldrons of IV differ only in profile and decoration from those of Hallstatt proper. Can we admit that, in Hungary, the safety pin, having blossomed into fantastic forms in a century, then survived fossilized for 450 years. Even so, Åberg's scheme would leave a gap at the end of period V, whereas in fact bronzes of that period have been found associated with a Scythian mirror.

The deficiency of bronzes to fill a period V as long as periods III and IV is 'explained' by 'the quick cessation of the practice of burying hoards in the earth' (other authors have seen in the Scythian invasion a reason for such deposition). But it would still be legitimate to ask what sepulchral and domestic pottery will occupy the interval? Åberg makes no attempt to answer this demand. He has already assigned to period II Pannonian ware, the urns of Zagyvapálfalva and even the type of tankard found high up in the *tell*

at Pécska (in view of the exact parallel from the Shaft Graves of Mycenae I must now accept a high date for the type) and to period III the ' Buckelkeramik ' of Tószeg C (found with Pannonian ware) and the ' Villanovan ' urns from Pécska. The majority of the known cemeteries and over two-thirds of the stratified deposits in the settlements have thus been used up by 1000 B.C. Yet survivals of Bronze Age traditions in the native pottery of ' Scythian ' (and even La Tène) graves prove a continuity of culture for a further four centuries.

The easiest escape from the impasse would still seem to be to lower the dates of all the later periods ; the settlements and cemeteries of period II are rich enough to cover far more than the 150 years Åberg actually allows for them even if some early swords and urnfields be transferred to an annex like Reinecke's C2—a passing episode leading up to phase D that itself is only a prelude to ' Hallstatt A '. But in that case Åberg's very neat argument for the priority of Hungarian bronze-work of period IV over the Italian would go by the board.

Perhaps another solution can be found. Ireland shows that because a bronze industry lasts long it does not therefore begin late and can still exert a potent influence on distant lands. Åberg's case for deriving the Villanovan industry from the Hungarian makes convincing reading. And it gives a satisfactory solution to an outstanding problem of Italian prehistory. But it can only be established by completing the archaeological record from Hungary down to the Scythian invasion. This the hoards cannot do. But there may be settlements and cemeteries which, if systematically explored and published as Banner has published the cemeteries round Szeged, would fill the gap. Åberg himself by his study of the latter material has brought about a complete revision of conclusions which seemed inevitable nine years ago. V. G. CHILDE.

TRANSACTIONS OF THE II INTERNATIONAL CONFERENCE OF THE ASSOCIATION ON THE STUDY OF THE QUATERNARY PERIOD IN EUROPE. Fasc. v. *Scientific, Technical, Geological and Prospecting Editorial Office, Leningrad-Moscow*, 1935. *pp.* 390. 3 *dollars.*

PALEOLIT SSSR. (Izvestiya Gos. Akad. Istoriy Materialnoy Kultury, 118) OGIZ. *Moskva-Leningrad*, 1935. *pp.* 275. 5 R 25k.

GARGARINO. *By* S. I. ZAMIATNIN. GAIMK, *Leningrad*, 1935.*

The fifth volume of the Transactions of the Conference held in 1932 contains papers devoted principally to archaeological subjects. It is well printed on good paper and contains numerous line-drawings admirably reproduced. All the papers are in English, French or German and accompanied by exhaustive bibliographies, supplemented by 40 pages of bibliography at the end of the volume. The papers by Mirčink on the geology of Russian palaeolithic sites (English), by Polikarpovich on palaeolithic and mesolithic sites in White Russia (German), by Efimenko on stations in the East European Plain (German), by Bonch-Osmolovoski on the Old Stone Age of the Crimea (French), and by Sosnovski on palaeolithic sites in North Asia give an exhaustive survey of the results of palaeolithic investigations in the territory of the U.S.S.R. down to 1932. They are supplemented in the same volume by reports on excavations at Chokurcha and Ilskaya and,

* A short account of other aspects of archaeology in the U.S.S.R. (also by Professor Gordon Childe) will be found in the Proceedings of the Prehistoric Society for 1935, pp. 151–4 (London agents, H. K. Lewis, 136 Gower St., London, W.C.1).—EDITOR.

in *Paleolit* SSSR, by others on Malta in Siberia, Derkul and Gargarino. The last named report has been published separately in French with first class plates. In it Zamiatnin adds a very interesting reconstruction of the Laussel bas-reliefs as a single scene of magical significance.

In all the papers one is impressed with the meticulous accuracy with which post-revolutionary excavations have been conducted. Thus the Soviet excavators have been able to define the form of the actual dwellings corresponding to Upper Palaeolithic 'open stations', solving a problem which excavations in France and Central Europe had left open. The charcoal from palaeolithic hearths has also been submitted to botanical examination which throws considerable light on the environment of palaeolithic men at several periods. Russian archaeologists have adopted the French names for palaeolithic culture-periods but use these in a chronological sense and not as designations for distinct cultures. Indeed they adopt throughout an evolutionist attitude in opposition to migrationist and diffusionist theories. It is even suggested that modern man evolved out of *Homo neandertalensis*.

The oldest traces of human occupation in the territory of the U.S.S.R. are found in the lower level of the cave of Kiik Koba in Crimea. Here a typical flake industry is found associated with a temperate fauna (wolf, *Cervus megaceros*, Saiga antelope, wild ass, ox, red deer and hare) and with juniper, willow and thorny scrub—evidently a Riss-Würm assemblage. In the upper occupation-layer of the same cave mammoth, woolly Rhinoceros, cave bear and other 'cold' animals mark the onset of the Würm glaciation. A Neandertal skeleton buried in an artificial excavation was found in this level. The 800 flint implements can all be described in a general way as Mousterian. 'Points' accounted for 44 per cent. of the tools (10 per cent. worked on both faces), side-scrapers for 37 per cent. and fist-axes (very minute) for 1 per cent. The thin bifacial tools, sharply pointed and flattened on one face, are compared to La Micoque types, but comparison with the African Still Bay and 'Sbäikian forms might be more relevant. Bifacial tools, including now even side-scrapers, recur with a similar fauna in the Chokurcha cave in Crimea and—in dolomite and other inferior materials—at Ilskaya in the Kuban valley. This site is assigned on geological grounds to early Würm times.

A later 'Mousterian' accompanied by a colder fauna (including even the Arctic fox) is represented in the cave of Chaitan Koba, also in Crimea. Out of 500 implements only 14 were worked on both faces while 10 would pass for gravers. Points and side-scrapers predominate, some points having been resharpened by a graver blow. A rather similar 'Mousterian' has been found in Ukraine, near the junction of the river Derkul with the Donetz.

Industries of early and middle Aurignacian aspect were accompanied by remains of brown bear, steppe animals, river fish, poplar, birch, juniper and willow, but very little mammoth and no rhinoceros in the cave of Syuren 1, again in Crimea. The lowest level yielded one Mousteriform point, resharpened by a graver blow, and some side-scrapers as well as backed blades, angle-gravers and nuclei of upper palaeolithic type. In the middle layer keeled scrapers and five beaked gravers recall the Middle Aurignacian flint-work of the West. The topmost layer yielded knife-blades resembling the Gravette type in form and technique.

These older Aurignacian forms are hardly encountered in the open stations of the South Russian plain, though Zamiatnin has secured a few beaked gravers and an isolated blade of Châtelperron form at Gargarino, The most distinctive tool is the shouldered point with long, wide tang, as at Willendorf; such are associated with a few crude

laurel-leaves, worked on both faces but not all over, at Kostënki I. At the latter site the mammoth and horse were the principal game with a little reindeer and polar fox; at Gargarino the woolly rhinoceros took the place of the horse. Both these sites are already famous for the female statuettes discovered in them, but the dwellings—the first palaeolithic houses to be discovered—deserve equal celebrity. They were underground huts, like those of modern Arctic peoples. The foundations were hollowed out in the löss (at Gargarino an oval 5.5 m. by 4.5 m.) and the area covered with a roof of skins or turfs over which earth and refuse were piled. The decay and collapse of the roof has left this refuse spread as an ' upper relic bed ' above the actual floor upon which only finished articles lay.† Fire-pits and cooking-holes were dug in the floor, and an examination of the ashes showed that bone was used for fuel.

Another open station, Mezin, famous already before the war, may perhaps be slightly later than the above in view of the prominence of reindeer, musk ox and fox and the comparative rarity of rhinoceros. Its celebrity is due to the highly developed industry in bone, horn and ivory and to the geometric art which uses the meander pattern freely. In both respects Mezin resembles Malta in Siberia on the Angara which flows out of Lake Baikal.

In the fauna of Malta reindeer was represented by over 400 specimens, Arctic fox by 50, mammoth by 9 and rhinoceros by 10; glutton, cave lion, bison, horse and wolf also occurred. The flint tools include Mousteriform side-scrapers and discs as well as blade tools—gravers, end-scrapers and hollow-scrapers. Bone and ivory artifacts—pins, needles, chisels, lance-heads—are very abundant. The site has been made justly famous by the discovery of 20 female statuettes and other art objects. At least three of the figures are represented wearing a tailored dress, presumably of fur, like that of contemporary Polar tribes. Three sorts of hair—woolly, wavy and straight—are carefully distinguished. If the representations can be accepted as accurate, they would indicate that ulotrichy, cymotrichy and leiotrichy were simultaneously present in the hunting community living at Malta. And so, since the peoples thus distinguished presumably intermarried, the genes determining a character on which physical anthropologists place great reliance (Huxley and Haddon, *We Europeans*, p. 114) will have had 20,000 years in which to become thoroughly mixed up. Five figures of flying geese (not stylized women, as suggested by E. B. Petri in his paper to the Prehistoric Congress in London, 1932), were also found and a bone plaque decorated with a true spiral in a peculiar pointillé technique.

The age of a site lying so far east is hard to determine either by typology or fauna. Sosnovski holds that it must be later than Kostenki, which he would compare with the French Solutrean. The discoverer, Gerasimov, would equate his site with the Aurignacian and has lately discovered a split-based bone lance-head to support his view. The remaining Siberian stations, despite the prominence of Mousteriform types (at Afontovagora II, lower layer, 70 per cent. of the stone implements fall into this class) are generally held to be later than Malta and accordingly comparable chronologically to the Magdalenian of France.

In European Russia stations on the plain which chronologically must correspond with the French Magdalenian are enumerated by Efimenko, but all, except perhaps Suponevo and Timonovka, lack the distinctive features of that culture. They still fall within the

† It will be recalled that a precisely similar phenomenon has been recorded in the modern pit-dwellings of Central Europe, which, in view of the facts here recorded, may be regarded as the oldest known type of house (see ANTIQUITY, X, 35–6).

last Ice Age, and, like the stations of the Kostënki group, normally lie on the middle terrace of river valleys. The period (Final Aurignacian to Late Magdalenian) so richly represented by the two groups of open stations on the plain is left a blank in Bonch-Osmolovski's table of finds from Crimean caves—a blank which suggests that the relative datings by typology of the two series of sites may be misleading. After the Aurignacian of Syuren I he sets an Azilian represented in the caves of Syuren II and in the bottom layer at Chan-Koba. In both cases the flora is boreal as in the Aurignacian, but mammoth and other Arctic animals have finally disappeared though wild ass, Saiga antelope and *Cervus megaceros* persist. The lower Azilian level at Chan-Koba yielded angle gravers and other blade tools, some small triangles and segments and one of those long pebble fabricators that are known as 'limpet scoops' in Scottish Azilian sites. Grooved bone points, to be armed with microliths, occurred in a higher 'Sviderian' level. Still higher up, when oakwoods had replaced the boreal trees and the Saiga and his compeers had vanished, comes a Tardenoisian industry that is strictly speaking neither geometric nor microlithic. The little tanged points, so common on the earlier post-glacial dune-sites on the plain and presumably derived from the shouldered points of Kostënki, seem unrepresented in the Crimean caves; their distribution on the plain is discussed by Voyedovski in the *Transactions*.

V. G. CHILDE.

THE LEGACY OF ENGLAND: an illustrated survey of the works of man in the English country. With contributions by ADRIAN BELL, GEORGE A. BIRMINGHAM, EDMUND BLUNDEN, IVOR BROWN, BERNARD DARWIN, CHARLES BRADLEY FORD, R. H. MOTTRAM, G. M. YOUNG; and 114 illustrations from photographs. *Batsford*, 1935, *pp.* 248. 5*s*.

This book is composed of single chapters by the various authors on different aspects of the English countryside. The subjects selected are landscape, the farm, the village, the country house, the country town, the country church, the inn, and sport in the country. The treatment is more or less historical and evolutionary as well as descriptive. Mr Blunden is literary, displaying the English landscape reflected in contemporary literature from Chaucer onwards, and so, to some extent, is Mr Bell. Mr Ford's treatment of his chapter is economic, Mr Young's architectural, Mr Mottram's pleasantly discursive, Mr Birmingham's historical, Mr Brown's reminiscent, and Mr Darwin's faintly regretful. The pictures are delightful, and though we wish that Mr Ford had not described the Glastonbury Lake Village as 'raised up on stilts, three thousand years ago', yet this will be a companionable bedside volume, and is cheap at the price.

DINA PORTWAY DOBSON.

THE ENGLISH ABBEY: its life and work in the Middle Ages. *By* F. H. CROSSLEY. With a foreword by the RIGHT HON. W. ORMSBY-GORE. *Batsford*, 1935, *pp.* 128. 7*s* 6*d*.

This book is one of the most scholarly of the volumes on the Middle Ages issued by Messrs. Batsford. Though professing to be written for the general reader and the sightseer, it is in fact a concise account of the origins and development of monasticism in England; with chapters on the buildings, the life led within the walls, the monastic administrative system, its social value, and gradual decline. The excerpts from contemporary sources are numerous and illuminating, and a useful list of such authorities is appended. The illustrations, both photographs and sketches, are most attractive, and the plans good.

This sympathetic study of the life of communities that were, with all their faults, for centuries ' fortresses amidst a world of savagery ', as the author says, should be a help to many people who want to have a better understanding of the magnificent buildings left by the monks.

Two slips should be corrected in the next edition. Bristol, as well as Carlisle, was an Augustinian church that attained the rank of a cathedral (p. 6) ; and Matthew Paris lived in the thirteenth, not the eleventh century (p. 79). DINA PORTWAY DOBSON.

VORISLAMISCHE ALTERTUEMER. *By* C. RATHJENS *and* H. v. WISSMANN. (Hamburg University ; Abhandlungen aus dem Gebeite der Auslandskunde, Band 38). *Friederischsen : de Gruyter & Co.*, 1932, *pp.* 212 *and* 167 *photographs.* 160 *diagrams, &c., with map.* RM. 15.

LANDESKUNDLICHE ERGEBNISSE. (The same authors, series, and publishers. Band 40, 1934), *pp.* 229 *and* 225 photographs, 82 *diagrams*, 3 *maps.* RM. 20.

The authors were baulked of their hope of a long journey through Arabia and had to be content with a trip from Hodeida to Sanaa and a few excursions from the capital ; however, they made good use of their limited opportunities and have checked their observations, whenever possible, by those of others. The *Altertuemer* describes the antiquities they saw and is very readable, for it tells about their dealings with the Arabs. They met difficulties in the excavation of a temple, a task which they undertook at the request of the Imam although they were not professional archaeologists, yet they kept on good terms with the local chief in spite of the fact that they got direct orders from the Imam to override his authority. The tale of their doings is the best testimonial to the authors. The temple, a few miles north of Sanaa, was of a kind hitherto unknown in Arabia. The sanctuary was so ruined that nothing could be learned of its interior. It was oblong, one long side faced a court which had colonnades on the other three sides. To right and left were other buildings but in the front (the east), the ground fell away sharply, just beyond the colonnade. In places the walls had been faced with panelled flags of stone ; traces of painting were also found. The plan is like that of the main mosque in Sanaa, which may well be on the site of an earlier sanctuary. It seems that the temple was ruined by lava.

The lower courses of the walls of towns and castles are often Sabaean ; artificial caves in inaccessible cliffs, apparently graves, are common. Old cisterns are everywhere. The open ones are usually round, the covered ones, when oblong, are roofed by an arch, and if square the roof is supported by pillars. Those which are cut high in a hillside are like the pits to be seen in Galilee. The people were great masons but not great artists. The builders used one capital with many variations which are all angular. The authors saw one which they believe to be early ; it is suggested to them that the angular forms were derived from the palm tree. The best bit of work found was the head and paws of a lion in bronze : it remains in Sanaa. The conclusion is that South Arabia was the land of Punt, that the builders of the elliptical temple at Marib were of another race than the Semites who built the square ones, which are also found in Ethiopia, a land colonized from Arabia.

The *Ergebnisse* can be read only by a geologist but this does not detract from its value as a scientific record. As the land rises 2000 metres in less than 30 kilometres, it is obvious that mighty forces have been at work and the country is a geologist's paradise. The authors saw only one cross-section of the country, so many problems are left unsolved.

Lava of three ages can be seen and the latest is thought to belong to the early Christian era. Plant life is treated fully, including all crops, especially the distribution of coffee. But there is something for all tastes. The account of the Jews agrees with that given by Brauer in *Ethnologie der Yemenitischen Juden*, though taking a slightly more favourable view of their lot. They may own houses or land anywhere though they must live in a Ghetto. No Jews live among the Sunni Muslims ; the authors do not say if it is still considered disgraceful to kill a Jew, as bad as hitting a woman. At the wedding the feet and hands of the bride are dyed black. There seems to be one mistake : the *tēba* is not the ark in which the scroll of the Law is kept but the desk from which it is read.

The highlanders differ from the lowlanders in race, religion, and habits. The straw hat of the lowlands is very like that worn in north Africa. The Zaidi sectaries are confined to the hills ; among them are a few communities of Ismailis, who also inhabit Nejran in the north. During the decay of the Imam's power, nomad tribes from the east took to themselves rights of ownership in the hills, even in the extreme west facing the sea. This absentee ownership can be paralleled in north Arabia.

The photographs, sketches, diagrams, and maps are first class ; the authors are to be congratulated on a fine piece of work. A. S. Tritton.

A HUNDRED YEARS OF ANTHROPOLOGY. *By* T. K. Penniman. (The Hundred Years Series, no. 4). *Duckworth*, 1935. *pp.* 400. 15*s*.

The table of contents indicates the range of this instructive book, which deals with the Scope of Anthropology ; the Formulary Period : Anthropology before 1835 ; the Convergent Period : *c.* 1835–1859 ; the Constructive Period : 1859–1900 ; the Critical Period: 1900–1935 ; the Future ; and appendices giving a chronological list of men and events, museums, bibliography, etc. The many and notable contributions which Oxford men have made to the anthropological sciences are freely noted, but not to the neglect of workers in other universities or institutions.

As one who in recent years has written a History of Anthropology* I have read Mr Penniman's book with great interest, but he has the advantage of having more space at his disposal and therefore can amplify his remarks, much to the benefit of his readers. The book can be recommended with confidence as giving a fairly well-balanced description of the progress of the anthropological sciences during the past one hundred years, and also as presenting a reasonably unbiased account of the theories and methods of numerous students. The ' theory of the archaic culture diffused from Egypt according to Elliot Smith and W. J. Perry ' however, is curtly dismissed (p. 329) by a quotation from Pater W. Schmidt. Mr Penniman gives brief accounts of the comparative, evolutionary, historical, diffusionist, functional and other ' schools ', all of which are merely methods of approach and no one of them a complete discipline. ' Attacks on the evolutionary school as it exists today are like flogging a dead horse. The best members of that school welcome the emphasis which the others have placed on a fresh outlook on the evidence, and refuse to be labelled. They simply keep an open mind and a critical, refusing to allow any one method to be enthroned as the only one ' (p. 332). One feature of the trend of recent investigations clearly brought out by the author is the recognition that a psychological approach is necessary to most branches of ethnology. He quotes Rivers as saying ' I am one of those who believe that the ultimate aim of all studies of mankind, whether historical or scientific, is to reach an explanation in terms of psychology, in terms

* London ; Watts & Co. 1934, 1*s* 6*d*. Reviewed Antiquity, 1935, ix, 247.—Editor.

of the ideas, beliefs, sentiments, and instinctive tendencies by which the conduct of man, both individual and collective, is determined'. He hopes that psychology 'will increasingly contribute its part in disclosing the origins of human actions and in giving direction to them' (p. 327). Accounts are given on pp. 66–70, 213–236, 332–338 of the progress of Archaeology, but without adding anything of importance to what has been previously published.

The book is so well documented that students can extend their investigations in all directions, but it is inevitable that omissions should occur; thus, a few authors who have made contributions of note to the science might have been mentioned, and when books have gone through more than one edition it is useful that the dates of at least the first and the last should be given, as it sometimes happens that they contain either different matter or another mode of treatment. A criticism of sins of omission or commission is dangerous as it is apt to have a boomerang effect. A. C. HADDON.

ISTROS: revue roumaine d'archéologie et d'histoire ancienne. Publiée sous la direction de S. Lambrino. 1, 1934 Fasc. 1. 45 *French francs per issue or annual subscription* 60 *French francs. pp.* 174, *illustrated.*

This new journal, designed to make more accessible the large amount of excellent work now being done in Rumania on Greek, Roman and prehistoric sites, deserves the most cordial welcome. It is concerned thus solely with lower Danubian archaeology, and its name is appropriately chosen. The most important articles, from which new and vital contributions to history can be obtained are those of M. Lambrino on the Ionian tribes of Histra, from which it appears that the Histrian Greeks were divided, even down to Roman times, into tribes of which the Aigikoreis and the Argadeis, with the religious cults that belonged to them, are specifically mentioned in inscriptions of Roman date. The importance of this paper to Greek historians is evident. A sarcophagus found at Tomi in 1931 is discussed by M. Coliu. Its interest lies in the religious symbols that adorn it, mainly of oriental religions from Asia Minor. Excavations on the Roman camp at Arcidava are fully reported, and add to our knowledge of Roman strategy north of the Carpathians. M. Vulpe discusses an Illyrian type of bronze axe and, with some audacity, associates its distribution with legends which place Phoenicians in those parts; his arguments are not convincing. M. Dimitrescu discusses the date of Cucuteni in great detail and throws much light on the matter.

Altogether it is an issue full of important material. The articles are all published in French. S. CASSON.

TERRACOTTAS FROM MYRINA IN THE MUSEUM OF FINE ARTS, BOSTON. *By* DOROTHY BURR. *pp.* 80 *and* 42 *plates. No price or publisher stated.* ('*Manufactured in Austria*'.) 1934.

This is in origin a dissertation for a doctorate. As a catalogue of one coherent group of minor works of art it will be valuable for general students of Greek art. Late Greek terracottas are rarely beautiful, often distressing by their sentiment and stupidity. Languid ladies, posturing Erotes and elegant nudes, when seen in bulk, tire the eye. There are a few fine pieces, such as the Nike figures, variants from one mould, which all derive from the Paeonian Nike. But none of the Boston pieces compares in quality with terracottas like the Heyl Aphrodite at Berlin. The Hellenistic Greek terracotta figurines of the Tanagra or Myrina type (and there is little difference) form an arid study

of what are little more than interesting mantel-piece ornaments. The only value for research to be derived from them is the occasional contributions they afford towards our restoration of sculptured figures in marble, from which many of them are derived.

The coroplasts who made these figures can be identified by their signatures. Thirty-nine names of Myrinean coroplasts are known, and one is able to get some idea of the quality of the individual artist. Usually the resultant analysis is little more than a revelation of a permeating vulgarity previously suspected in individual pieces.

S. Casson.

A MANUAL OF EXCAVATION IN THE NEAR EAST. *By* William Frederic Badè.* *University of California Press ; Cambridge University Press*, 1934. *pp.* 81, *with* 6 *plates*, 6 *text-figs.* 7*s.*

If an infinite capacity for taking pains is a true criterion of genius it can never be better applied than to the archaeological excavator. And Professor Badè of the Pacific School of Religion in his *Manual of Excavation* shows that his capacity is indeed infinite. Readers accustomed to the more opportunist methods generally practised in Europe will be filled with awe by this chronicle of relentless efficiency on a Palestinian *tell*, where the spirit of Pure Science walks hand in hand with the spirit of Henry Ford.

The *Manual* is based almost entirely on the experience accumulated by Professor Badè himself during several seasons' work at Tell en-Nasbeh, and for an expedition like his, employing 150 men, women, and children a high pitch of organization is clearly necessary if disastrous loss of time and evidence is to be avoided. But the author goes too far when he claims that ' with unimportant modifications ' his methods are ' applicable to archaeological enterprises in any part of the world ' ; his technique is largely unsuitable, or at least unnecessary, for the ordinary European excavation, and a great deal of the advice he gives refers only to the particular conditions of the Near East. In Europe, for instance, it is impossible to accept his dismissal of the trench system of digging as ' scientifically worthless ', and how would the British workman react if faced with a list of rules forbidding him ' obscene songs or conversation . . . brawling, fighting, and the carrying of weapons ' ?

But for those to whom the book is primarily addressed, that is for those concerned with the excavation of a site like Tell en-Nasbeh, it will provide many very useful suggestions, perhaps even a scheme in its entirety. If the procedure of the actual digging sounds rather mechanical, the constant personal supervision of the director which the system ensures must do much to obviate the dangers of such mechanization. The method of clearing successive strips of the *tell* down to bedrock, refilling each with the dump material from the next, cannot be ideal for the understanding of a series of imposed city-levels, but it is certainly rapid and economical, and in the case of en-Nasbeh has allowed complete excavation to be accomplished within a reasonable period of time. The treatment of finds from their first uncovering to their final registration, while making heavy demands on the time and skill of the staff, is altogether excellent, combining detail and thoroughness with simplicity of reference. Pottery in particular is admirably managed, and the idea of using potters' finger-prints for tracing the contemporaneity of strata in separated areas provides a delightfully ingenious piece of technique. It is only possible to echo the words of one of Professor Badè's assistants—' In fact, if a more thorough method of handling pottery has ever been used I do not know of it '.

* While this review was in type we have heard with great regret of Dr Badè's death.

Excellently printed though it is, an eighty page book of this kind seems dear at seven shillings ; for economy it would be easy to dispense with a full page photograph of an ordinary card-file, and perhaps even with the group of handsome Egyptian foremen. JACQUETTA HAWKES.

ROMANESQUE ARCHITECTURE IN WESTERN EUROPE. *By* A. W. CLAPHAM. *Oxford : Clarendon Press*, 1936. *pp.* XVI, 208, 58 *plans*, 44 *plates*. 10*s* 6*d*.

This valuable book supplies the need of a volume, of wide survey but moderate cost, embracing the Christian architecture of Western Europe between the end of the ancient world and the rise of the pointed-arch or Gothic style. It is not a supplement to Mr Clapham's well-known books on English Romanesque Architecture, for it includes their results in a compressed form ; and the range of its survey is immense, extending from Ireland and Scotland to the Crusaders' churches in Palestine, and in another direction from Sicily to Scandinavia. With such an enormous field, involving the mention of over seven hundred buildings, a great deal of detail cannot be expected ; but in cases of importance, such as the dates of the Cluny capitals and the sculpture of the cloister of Silos, Mr Clapham spreads himself out, and puts the reader in possession of the essential facts. Another inevitable limitation in a student's book of this size and price is in the matter of illustration. Here and there one might criticize Mr Clapham's selection of the eighty-six photographs which are reproduced—*e.g.*, the view of the stupendous portals of Saint-Gilles gives only a very general idea of the arrangement, and is too small to show the details. But on the whole the choice is excellent, and fairly distributed between the architectural and decorative aspects of the subject ; and it is supplemented by no less than fifty-eight plans of churches, and seven sketch-maps showing the position of the buildings in the principal countries. Casts of sculpture may be even more useful than photographs, and Mr Clapham does well to call attention to one of the grandest specimens, that of the Portico della Gloria, as the west portal of Santiago Cathedral is called, in the Victoria and Albert Museum. He might have mentioned that some of the reliefs from the cloister of Silos are also to be found there, not to speak of other works to which he refers.

What is Romanesque, and when did it begin ? Mr Clapham rightly says that it is the descendant of Roman building ; and indeed when one stands inside great English churches of the twelfth century, such as Peterborough and Norwich, one can feel the inspiration of the great Roman basilicas, in spite of the differences of treatment and detail. But before this fully developed Romanesque is reached, the ' Dark Ages ' intervene, including, as Mr Clapham's chapter shows, the last efforts of the ancient tradition in Theodoric's buildings at Ravenna and Charlemagne's at Aachen, together with the barbaric Lombard and Merovingian examples in Italy and France, and the Anglian churches of our own country. It is only in the tenth century that the ' First Romanesque ' architecture begins to appear in the north of Italy, the Rhone valley, and the shores of the Mediterranean as far as northeast Spain. Its characteristic was the use of stone vaulting for the roof, though at first this was confined to a narrow bay in front of the apse. But ultimately the whole church was vaulted, and so we are led on to the great eleventh and twelfth century churches of north and south Italy with their richly sculptured decoration, chiefly on the façades; for it was left to the French to develop and bring to perfection capitals, both of columns and cloister-shafts, carved with figure-subjects, for which Mr Clapham uses the rather harsh-sounding epithet ' historied ' instead of the

traditional and perfectly intelligible 'storied'. Monumental or decorative sculpture, though belonging to the history of art, is indissolubly connected with architecture; and in each section the story of structural evolution is followed by an account of the carving which went with it. There are notable examples of the sculptured portal in Italy (Modena, San Zeno at Verona, Pavia, etc.), but here again the great development (especially of the tympanum) belongs to France, where the portals of Moissac, Vézelay (*c.* 1120), and Saint-Gilles (*c.* 1150) show the high water-mark of achievement. With the latter Mr Clapham mentions the suggestion that some of the inspiration may have come from the Roman triumphal arch. The illustration (pl. 27*a*) of the relief of Eve in the garden, from Autun, will be to many a revelation of what 'alike for its simplicity and allurement must be considered one of the masterpieces of Romanesque art'.

It is in the twelfth century that we find the fully-developed Romanesque in France, where the features of no less than eight local or provincial schools are described; in England, where, through the Norman Conquest, even grander results are to be seen, *e.g.*, at Durham and Norwich; and in Germany, where, in the great churches of the Rhineland, a special type of basilica was evolved, with a distinctive outward appearance. Besides these fairly familiar fields, students will find summaries of the church architecture of the outlying countries—Ireland, Dalmatia, Hungary, Scandinavia. The Byzantine architecture of the East is excluded from the survey, but account is taken of the Byzantine elements in the Norman churches of Sicily, especially the mosaics of Palermo, Monreale, and Cefalù. On the other hand a chapter is devoted to the Crusaders' churches in Palestine and Syria, because their architecture was 'in all its essential features a French art', though forming a separate school. It lasted barely a century, but Mr Clapham has something to say about the features which the Crusaders brought back with them from the East, the most important being the pointed arch, which is found in Moslem buildings of the eighth century, and appears in France early in the twelfth.

Of late years archaeologists have devoted a good deal of study to the church architecture of Spain. The names of Lampérez y Romea, Puig y Cadafalch, and the late Prof. Kingsley Porter, have become familiar to students of these matters; and it is significant that the frontispiece (repeated on the cover) of this book is a view of the impressive but sombre interior of Santiago. Mr Clapham lucidly sketches the present state of our knowledge, not forgetting the Visigothic churches of the seventh century, where he finds the earliest examples of the horse-shoe arch; and he deals rather fully with the sculptures of the cloister of Silos, which Kingsley Porter would have dated before the end of the eleventh century, while Mr Clapham demonstrates that in all probability they belong to the middle and latter part of the twelfth. On the other hand he is decidedly in favour of Kingsley Porter's belief that the famous sculptured capitals of the apse of Cluny are contemporary with its completion in 1095, instead of belonging to the next century as the French authorities maintain. With regard to Cluny we should have liked to hear rather more than Mr Clapham has told us about the excavations being carried out by Professor Conant, but as that work is unfinished he may have thought it best to wait till the results are more complete.

Altogether students are deeply indebted to Mr Clapham for this book, and it can be recommended heartily for their use. As it will remain for a long time the English manual for its subject, it may be worth while to notice a few corrections which might be made in future issues. After Professor Hamilton Thompson's explanation of the term 'Commacine masters' as *Co-macini* (like *commonachi*) or associated masons, its meaning can hardly be described as 'still obscure' (p. 4). By a slip of memory, an

article on Pisan churches is ascribed to ' E. Jackson ' instead of Miss E. Jamison (p. 45 note). San Fedele (not Fidele, p. 36) is the usual form of the name of a well-known church at Como, and ' Santa ' (not ' San ', p. 47 note) Prassede is the correct title of the Roman church. Students may not understand the meaning of ' U. L. F. Halberstadt ' (p. 162, for the church of ' Unsere Liebfrau ' or Our Lady), and a uniform transliteration should be adopted for the forms ' Umayyad ' (p. 132), ' Omeyade ' (136), and ' Umeyade ' (95). G. McN. RUSHFORTH.

LOCAL COLOUR : A landscape analysis for sightseers. *By* E. F. VALE. *J. M. Dent*, 1934. *pp.* XII, 275. 5*s.*

This fascinating little book contains an amazing store of information on all sorts of subjects in any way connected with landscape and scenery. Without writing in a too technical style, the author presents us with a remarkable number of facts in a palatable form. The style is for the most part free and pleasant, though occasionally descending into rather peculiar colloquialisms.

Starting with a few remarks on the aesthetic value of landscape, he passes to an interesting treatment of elementary geology, emphasizing the importance of geology in the formation of history. In a chapter called ' Trees and Woods ', he deals with all sorts of subjects connected with timber, from its growth in the forest to its use in the building of houses or the making of furniture. An original if rather dubious theory is expounded about the lore of the rowan, but the author makes a definite mistake in assigning a Celtic origin to Runes. His theory as to the origin of Oghams is ingenious.

Another chapter deals with flowers, not omitting points of folklore and mythology connected with the subject. Objection may, perhaps, be taken to his saying that the ' fuchsia is of too bloated a colour for beauty ', that flax is ' a monstrosity ', or that the colour of the willow-herbs ' is a kind of washed-out red, with neither warmth nor elegance to recommend it '. He cannot have seen rose-bay growing in great profusion.

Then comes an interesting, if slightly confused chapter, entitled ' Birds, Creatures, and Water ' which contains one or two mistakes, the chief being the acceptance of the false etymology of ' swallow-holes ', and the reference to the singing nightingale as ' she '.

Selections from the author's notes on landscape, made ' on the spot ', are followed by appendices on many subjects, including a list of Royal forests.

The book is full of useful information and should appeal to a wide public.

MERIC DOBSON.

ANCIENT TIMES : a History of the Early World. *By* J. H. BREASTED. Second edition. *Boston, Ginn & Co.*, 1935. *pp.* XIII *and* 823, 4 *plates and* 32 *maps.* 10*s* 6*d.*

Few text-books on ancient history can have had such a wide popularity as the first edition of this book, published twenty years ago. Breasted had already brought out his *Short Ancient History* in 1915, which was a separate edition of his contribution to the *Outlines of European History* (1914) by James Harvey Robinson and himself. So that he staked his claim to this field, so far as English-speaking schools were concerned, only a year later than H. R. Hall made himself indispensable to Universities and more advanced students by the publication of his *Ancient History of the Near East* (1913).

Rostovtzeff's *History of the Ancient World* has challenged Hall's dominion since 1926. But in the schools Breasted has had no rival, and has justly earned the gratitude of teachers wherever the subject is taught in English.

REVIEWS

During the interval since the first appearance of *Ancient Times*, as readers of ANTIQUITY are well aware, the increase of archaeological research and of scientific excavations has been more marked than ever previously, and it was high time that a second edition should appear if the author was to continue to enjoy his reputation as a historian. The revised edition is in fact ' largely rewritten ', and it is not surprising that this should have been necessary. Even so, specialists will no doubt complain that it is not rewritten sufficiently to bring it up to date with the most recent discoveries in their own fields. To quote a single example:—Dr Breasted's position with regard to Akhenaten seems not to have changed materially from that expressed in his *History of Egypt* (1905), though a great deal has been since written to modify the exuberance of that outlook. However all such narrow criticism must give way to admiration for the man who could undertake such a survey at the present time in so comparatively a small compass. And certainly none was better equipped to grasp the detail and weld together the results of all the new discoveries in the field during the last twenty years, than the Director of the Oriental Institute of the University of Chicago. With upwards of twenty expeditions under his control scattered over the whole Near-Eastern area, he was constantly visiting the latest scene of excavation, receiving the last word in important discoveries, with a mass of recently acquired information, as yet unpublished, at his disposal, and most important of all, seeing the whole ancient world always as a united development. His death the other day robbed the study of Ancient History of one of its most effective benefactors ; but in his second edition of *Ancient Times* he has not only given a new lease of life to a most valuable text-book, but has also left us a monumental tribute to the breadth of his own viewpoint, to his understanding of ancient peoples, and to his tremendous desire to inspire his fellows with the story of human development.

S.R.K.G.

MÜNZDATIERTE AUSTRASISCHE GRABFUNDE. *By* JOACHIM WERNER. Band III : Germanische Denkmäler der Völkerwanderungszeit. *Edited by* Hans Zeiss for the Römisch-Germanische Kommission. *Berlin and Leipzig*, 1935. *pp.* IX, 157 *with* 38 *line and* 5 *collotype plates. Price not stated.*

This is the third volume in the admirable series of Migration Period monographs, edited by Dr Zeiss on behalf of the Römisch-Germanische Kommission, and, like the two already published, it is an able and informative work. It cannot fail to earn an enviable reputation for its author, whose keen insight and sound judgment invest this long plodding survey with an importance that is not surpassed by any of the excellent publications produced by the Kommission under the leadership of Dr Bersu. This new volume takes the form of an investigation of the chronology of the Reihengräber from the fairly secure stand-point of the numerous graves dated, or at least chronologically controlled, by coins. Its aim is to provide a working classification into broadly defined archaeological periods, and it has, wisely, little to do with the determination of ethnic groups ; in fact, it may be said to provide a chronological cross-section through the archaeology of the eastern Franks, the Alamanni, the Thuringians, and the Bavarians. In his early pages Dr Werner has many very sensible things to say about the value, or lack of value, of coins as dating material in Teutonic graves, and the periods into which he finally groups the controlled burials seems to me to inspire an ungrudging confidence. His system is not quite the same as that proposed by Veeck in the first volume of this

series, but Werner's closely-reasoned case deserves respect and will probably be accepted with very little modification. I do not think that the author fully appreciates the importance of style in the matter of the cloisonné jewellery, and to a foreign reader it seems that he does his material less than justice by his insistence on derivations from the archaeology of the Lombards. We all know that most of the Reihengräber material is poor indifferent stuff, but surely it is not so bad as to depend on Lombard influence to the extent claimed here. For the Lombard culture is a miserable derived thing, faltering and half-hearted in stylistic expression, and, in so far as it is purely Lombard, a reflection of fashions already old in the outer Teutonic world, whence the Lombards came. Did ring-swords, may I ask, evolve backwards? Does the cupped cloison of the Flonheim scabbard, to which I have called attention (ANTIQUITY, VII, p. 446), begin, instead of ending, on the sword-scabbard from Nocera Umbra I? And surely the heavy insipid Lombardic version of Style II tells its story too plainly for us to believe that we have in Italy of the late 6th century a flowering of a rich and original decorative art likely to impress profoundly and to be dynamically important. Werner, of course, does actually establish certain Lombard influences, and he shows convincingly how they came to affect his area; but I think it would have been as well to review other possible sources before hammering so hard at the Italian connexion.

The book abounds in interest. I would like especially to call attention to the appendixes, above all the note on the origin of the 'Spangenhelm'. There is also a list and distribution-map of the Coptic bronze bowls, which unquestionably appear in late graves. In a Wonsheim grave (Tf. 34) one appears side by side with a bronze ewer like our Wheathampstead example. This grave is dated after 600 and is a fine analogy to our Sarre grave in the British Museum with its ugly late brooch; here the Coptic bowl is described as 'ein sehr stark abgenutztes und geflicktes Becken', and I may say that in the Sarre grave the bowl is also a disreputable antique and has had its bottom patched. Weimar Grave 84 (early 6th century) contains one of the inlaid iron buckles of precisely the type that was found at Prittlewell in Essex; there are other buckles in this special technique from southern England and it is possible that they represent a survival of a Roman craft, for I have seen styli ornamented in this distinctive striped fashion. The brooches in Schretzeim 26 look, judging only by the drawings, as though they have re-made backs, and if this is so they may be a little older than the graves. But this late cloisonné is obviously very poor work, as indeed the Wittislingen find proves, and one can tell at a glance that Soest 106 is early 7th century. Dr Werner compares the Wonsheim brooch (Tf. II, 4a) with our Kingston brooch, which suggests to me that he is working from Salin's figure and not a photograph (*e.g.* ANTIQUITY, VII, opp. p. 141). I should like to hear more about the honey-comb cloison that is imitated in the late silverplated iron-work (Tf. 33). Does this pattern of cloison actually occur in jewellery in the Reihengräber? The style seems to begin in Italy in pre-Lombardic finds like the Cesena treasure, and we have it in England in 6th century composite jewelled brooches. It is drawn on the back of the Wittislingen brooches, but I have no record of it in garnet inlay in the Rhineland or southern Germany. This curious shadowy and obviously late repercussion of a distinctive style seems to me to be typical of the remote and derived nature of much of the archaeology of the Reihengräber. Dr Werner's study helps enormously in the elucidation of this material, but I hope the fact that it is now so beautifully and so skilfully presented to us will not suggest that it is the place where we are especially likely to find the sources and earliest dates of the fashions that interest us all.

T. D. KENDRICK.

REVIEWS

ILLUSTRATED REGIONAL GUIDES TO ANCIENT MONUMENTS under the ownership or guardianship of His Majesty's Office of Works. Volume 1. Northern England. *By* the Rt. Hon. W. ORMSBY GORE, F.S.A., M.P., First Commissioner of Works. *London : His Majesty's Stationery Office.* To be purchased directly from H.M. Stationery Office at the following addresses : Adastral House, Kingsway, London, W.C. 2 ; 120 George Street, Edinburgh ; York Street, Manchester ; 1 St. Andrew's Crescent, Cardiff ; 80 Chichester Street, Belfast, or through any bookseller. *1s*, postage *2d.*

This is the first of the regional guides to the monuments under the control of H.M. Office of Works and deals with the six northern counties. They are designed in the words of the preface ' to supplement the more detailed archaeological data available by a more general and popular account of all the monuments in a group of counties '. The scheme and general lay-out of this little volume is excellent. A brief historical account of the Prehistoric, Roman and Medieval periods is followed by notes on each of the monuments, hours of admission and admission fees. The accounts of the Prehistoric and Roman periods are somewhat unbalanced, the former being almost entirely confined to Yorkshire and the latter to Northumberland. No doubt the most important Roman works in the district are concentrated in Northumberland and Cumberland along the line of the Roman wall. There is less excuse, however, for the Prehistoric section being almost entirely based on Yorkshire. Long barrows are not entirely absent from Northumberland, three at least having recently been identified. Besides the few beaker sherds found near the Northumberland coast, over thirty beaker burials are known in the county. There are megalithic monuments in Northumberland as well as in Cumberland. The ' Mare and Foal ', the ' Poind and His Man ' and the ' Four Kings ', whilst perhaps not so imposing as ' Long Meg and her Daughters ', are still evidence that the megalithic builders were not restricted in their distribution to the western side of the Pennines.

There is a good concise account of the Roman period of occupation. Agricola's road, from Carlisle to probably Corstopitum, is the Stanegate not ' Stane Street ', and it is perhaps rather unfair to suggest that there are only scanty remnants of it ; considerable lengths of the road are still in use. Once again General Wade is described as the ' greatest destroyer ' of Hadrian's Wall. Actually he had been in his grave about four years before the Military Road was commenced.

Mr Ormsby Gore is most at home with the Medieval period. The castles and ecclesiastical buildings in northern England which are under the control of H.M. Office of Works include such magnificent specimens as Warkworth Castle, Byland, Easby and Rievaulx Abbeys and Kirkham Priory.

The volume contains twenty excellent photographs and a useful plan showing the distribution of the monuments. W.P.H.

[Criticism of minor details must not be allowed to obscure the fact that, by issuing this admirable series of guides, the First Commissioner has earned the gratitude both of the specialists and of the general public. Since this review was in type we have received the second Volume of the Regional Guides—Southern England : Avebury, Stonehenge, Maiden Castle, Portchester Castle, Dover Castle, Pevensey Castle, Richborough Castle, Nunney Castle, Tintagel, Carisbrooke Castle, Farleigh Castle, Netley Abbey, Muchelney Abbey, Old Sarum, Restormel Castle, among other notable monuments. It will, we are certain, meet with the same general response which has been given to the first volume.—EDITOR.]

ANTIQUITY

ANCIENT MONUMENTS AND HISTORIC BUILDINGS. H.M. Office of Works. CORBRIDGE Roman Station (Corstopitum) Northumberland. Official Guide by ERIC BIRLEY, M.A., F.S.A. *London : His Majesty's Stationery Office.* 6*d*, postage 1*d*.

There are guides and guides. This is one of the best sixpennyworth that we have seen. It combines a useful account of the site with a brief description of those parts which are still to be seen and the objects found. The description of Corstopitum as a ' station ' is perhaps misleading to some, but it was an important road station during the greater part of the Roman occupation, and it was perhaps only the death of the emperor Severus at York in A.D. 211 that prevented it from becoming a legionary fortress. An adequate description of the finds could hardly be contained in the four and a half pages allocated to this section. Mr Birley more than hints that Corstopitum may have had some sub-Roman existence after the close of the 4th century, and the fact that the names of Corstopitum and Luguvallium (Carlisle) alone of all the Roman sites in Northumberland and Cumberland are still partly incorporated in the modern names of the sites is suggestive. Corchester was the name attached to the site of Corstopitum, and the Anglian *chester* of the one gives place to the Celtic *caer* of the other. W.P.H.

Books Received

THE ANCIENT BRIDGES OF WALES AND WESTERN ENGLAND, *by* E. Jervoise. *Architectural Press*, 9 *Queen Anne's Gate, Westminster*, S.W. 1. 1936. *pp.* XII, 180, 91 *illus.* 6*s* 6*d*.

YORK MINSTER AND NEIGHBOURING ABBEYS AND CHURCHES, *by* Gordon Home. *J. M. Dent*, 10–13 *Bedford Street, W.C.* 2. 1936. *pp.* 192, *numerous illustrations.* 2*s*. 6*d*.

ANCIENT BURIAL-MOUNDS OF ENGLAND, *by* L. V. Grinsell. *Methuen*, 36 *Essex Street, W.C.* 2. 1936. *pp.* XII, 240. 24 *plates*, 11 *text-plans.* 12*s* 6*d*.

THE NORMANS IN GLAMORGAN GOWER AND KIDWELI, *by* Lewis D. Nicholl. *Cardiff : William Lewis*, 39 *Penarth Road.* 1936. *pp.* 208. 8*s* 6*d*.

PARISH CHURCHES OF NORFOLK AND NORWICH, *by* C. J. W. MESSENT. *Norwich : H. W. Hunt*, 14 *Orford Hill.* 1936. *pp.* 298. 7*s* 6*d*.

NIEUWE DRENTSCHE VOLKSALMANAK, 1936. *Assen : Van Gorcum and Co.*

MEDIEVAL INDIAN SCULPTURE IN THE BRITISH MUSEUM, *by* Ramaprasad Chanda. *Kegan Paul and Co.*, 68 *Carter Lane, E.C.* 4. 1936. *pp.* XIV, 78, 24 *plates.* 10*s* 6*d*.

THE ROMAN INVASIONS : A SAGA OF THE CALEDONIAN RACE, *by* Laurence O. Pitblado. *George Allen, Museum Street, W.C.* 1. 1935. *pp.* 160, *with maps.*